Rule 391-3-4-.13 Financial Responsibility

(1) Applicability. The requirements of this Rule apply to all owners and/or operators of solid waste processing, treatment, storage or disposal facilities other than permit-by-Rule facilities, except for the exemptions provided for in (3) below.

(2) 40 CFR Part 258, Subpart G as amended, 56 Fed. Reg. 51029 (October 9, 1991), as amended at 57 Fed. Reg. 28628 (June 26, 1992); 58 Fed. Reg. 51547 (October 1, 1993); 60 Fed. Reg. 40105 (August 7, 1995); 60 Fed. Reg. 52342 (October 6, 1995); 61 Fed. Reg. 60337 (November 27, 1996); and 63 Fed. Reg. 17729 (April 10, 1998) is hereby incorporated by reference.

(3) Financial responsibility shall be required for any solid waste handling facility and shall provide adequate financial responsibility to ensure the satisfactory maintenance, closure and post-closure care of such facility or to carry out any corrective action which may be required as a condition of a permit.

(4) Forms. Allowable financial mechanisms for closure, post-closure care, and corrective action (i.e., trust fund, surety bond, letter of credit, insurance, financial test, or guarantee) shall be submitted on forms as provided or in a format as prescribed by the Director.

Authority: O.C.G.A. Secs. 12-8-20 et seq., 12-8-23.

Rule 391-3-4-.14 Groundwater Monitoring and Corrective Action

(1) Applicability. All permits and modifications of permits for solid waste landfills, unless a variance has been approved, issued after the effective date of this Rule require the installation of a groundwater monitoring system. Such groundwater monitoring and, if needed, corrective action shall be conducted in accordance with this Rule. Industrial solid waste landfills and construction/demolition waste landfills must also meet the requirements of this Rule unless otherwise exempted by the Division. CCR units must meet requirements in paragraph (6) of Rule 391-3-4-.10.

(2) Groundwater monitoring requirements under paragraphs (8) through (50) of this Rule may be suspended by the Director for a MSWLF unit if the owner or operator can demonstrate that there is no potential for migration of hazardous constituents from that MSWLF unit to the uppermost aquifer during the active life of the unit and the post- closure care period. This demonstration must be certified by a professional geologist registered to practice in Georgia or a professional geotechnical engineer registered to practice in Georgia and the demonstration approved by the Director, and must be based upon:

(a) Site-specific field collected measurements, sampling, and analysis of physical, chemical, and biological processes affecting contaminant fate and transport, and
(b) Contaminant fate and transport predictions that maximize contaminant migration and consider impacts on human health and the environment.

(3) New MSWLF units must be in compliance with the groundwater monitoring requirements specified in this Rule before waste may be placed in the unit.

(4) When referenced in this Rule, Appendix I and Appendix II constituents shall refer to those constituents as listed in Appendix I and II of 40 CFR Part 258, Subpart E, as amended, 56 Fed. Reg. 51032-51039 (October 9, 1991), which are hereby incorporated by reference.

(5) When referenced in this Rule, Appendix III and Appendix IV constituents shall refer to those constituents as listed in Appendix III and IV of 40 CFR Part 257, Subpart D, 80 FR 21468, (April 17, 2015), which are hereby incorporated by reference.

(6) Once established at a MSWLF unit, groundwater monitoring shall be conducted throughout the active life and post-closure care period of that MSWLF unit as specified in Rule 391-3-4-.12.

(7) The Director may approve alternative schedules for demonstrating compliance with paragraph (11)(b) pertaining to notification of placement of certification in operating record; paragraph (23)(a) pertaining to notification that statistically significant increase (SSI) notice is in operating record; paragraph (23)(b) and (c), pertaining to an assessment monitoring program; paragraph (25), pertaining to sampling and analyzing Appendix II constituents; paragraph (27)(a) pertaining to placement of notice (Appendix II constituents detected) in record and notification of notice in record; paragraph (27)(b) pertaining to sampling of Appendix I and II to this Rule; paragraph (30) pertaining to notification (and placement of notice in record) of SSI above groundwater protection standard; paragraphs (30)(a) and (34) pertaining to assessment of corrective measures; paragraph (38) pertaining to selection of remedy and notification of placement in paragraph record; paragraph (46)(d) pertaining to notification of placement in record (alternative corrective action measures); and paragraph (49) pertaining to notification of placement in record (certification of remedy completed).

(8) Groundwater Monitoring Systems. A groundwater monitoring system must be installed that consists of a sufficient number of wells, installed at appropriate locations and depths, to yield groundwater samples from the upper most aquifer that:

(a) Represent the quality of background groundwater that has not been affected by leakage from a unit. A determination of background quality may include sampling of wells that are not hydraulically upgradient of the waste management area where:

1. Hydrogeologic conditions do not allow the owner or operator to determine what wells are hydraulically upgradient; or
2. Sampling at other wells will provide an indication of background groundwater quality that is as representative or more representative than that provided by the upgradient wells; and

(b) Represent the quality of groundwater passing the relevant point of compliance specified by the Director under Rule 391-3- 4-.07. The downgradient monitoring system must be installed at the relevant point of compliance specified by the Director under this Rule. When physical obstacles preclude installation of groundwater monitoring wells at the relevant point of compliance at existing units, the downgradient monitoring system may be installed at the closest practicable distance hydraulically downgradient from the relevant point of compliance specified by the Director under Rule 391-3- 4-.07 that ensures detection of groundwater contamination in the uppermost aquifer.

(9) The Director may approve a multi-unit groundwater monitoring system instead of separate groundwater monitoring systems for each MSWLF unit when the facility has several units, provided the multi-unit groundwater monitoring system meets the requirement of paragraph (8) of this Rule and will be as protective of human health and the environment as individual monitoring systems for each MSWLF unit, based on the following factors:

(a) Number, spacing, and orientation of their MSWLF units;
(b) Subsurface and Surface Hydrogeologic setting;
(c) Site history;
(d) Engineering design of the MSWLF units, and
(e) Type of waste accepted at the MSWLF units.

(10) Monitoring wells must be cased in manner that maintains the integrity of the monitoring well borehole and prevents interaquifer migration of fluids. This casing must be screened or perforated and packed with gravel or sand, where necessary, to enable collection of groundwater samples. The annular space (i.e., the space between the borehole and well casing) above the sampling depth must be sealed to prevent contamination of samples and the groundwater.

(a) The owner or operator must notify the Director that the design, installation, development and decommission of any monitoring wells, piezometers and other measurement, sampling, and analytical devices documentation has been placed in the operating record; and
(b) The monitoring wells, piezometers, and other measurement, sampling, and analytical devices must be operated and maintained so that they perform to design specifications throughout the life of the monitoring program. Monitoring wells and piezometers shall be constructed by drillers having a valid and current bond with the Water Wells Standards Advisory Council. Monitoring wells require replacement after two dry sampling events, unless an alternate schedule has been approved by the Division.

(11) The number, spacing, and depths of monitoring systems shall be:

(a) Determined based upon site-specific technical information that must include thorough characterization of:

1. Aquifer thickness, groundwater flow rate, groundwater flow direction including seasonal and temporal fluctuations in groundwater flow; and

2. Saturated and unsaturated geologic units and fill materials over lying the upper most aquifer, materials comprising the uppermost aquifer, and materials comprising the confining unit defining the lower boundary of the upper most aquifer; including, but not limited to: thickness, stratigraphy, lithology, hydraulic conductivities, porosities and effective porosities.

(b) Certified by a qualified groundwater scientist. Within 14 days of this certification, the owner or operator must notify the Director that the certification has been placed in the operating record.

(12) Groundwater Sampling and Analysis Requirements. The groundwater monitoring program must include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide an accurate representation of groundwater quality at the background and downgradient wells installed in compliance with paragraph (8) of this Rule. The owner or operator must notify the Director that the sampling and analysis program documentation has been placed in the operating record and the program must include procedures and techniques for:

(a) Sample collection;
(b) Sample preservation and shipment;
(c) Analytical procedures;
(d) Chain of custody control; and
(e) Quality assurance and quality control.

(13) The groundwater monitoring program must include sampling and analytical methods that are appropriate for groundwater sampling and that accurately measure hazardous constituents and other monitoring parameters in groundwater samples. Groundwater samples are not normally field-filtered prior to laboratory analysis. If samples are filtered, then both filtered and unfiltered samples shall be collected and submitted to the laboratory for analysis.

(14) The sampling procedures and frequency must be protective of human health and the environment.

(15) Groundwater elevations must be measured in each well immediately prior to purging, each time groundwater is sampled. The owner or operator must determine the rate and direction of groundwater flow each time groundwater is sampled. Groundwater elevations in wells which monitor the same waste management area must be measured within a period of time short enough to avoid temporal variations in groundwater flow which could preclude accurate determinations of groundwater flow rate and direction.

(16) The owner or operator must establish background groundwater quality in a hydraulically upgradient or background well(s) for each of the monitoring parameters or constituents required in the particular groundwater monitoring program that applies to the MSWLF unit, as determined under paragraph (21) or (24) of this Rule. Background groundwater quality may be established at wells are not located hydraulically upgradient form the MSWLF unit if it meets the requirements of paragraph (8)(a) of this Rule.

(17) The number of samples collected to establish groundwater quality data must be consistent with the appropriate statistical procedures determined pursuant to paragraph (18) of this Rule. The sampling procedures shall be those specified in paragraph (22) for detection monitoring, paragraphs (24) and (27) for assessment monitoring, and paragraph (35) for corrective action.

(18) The owner or operator must specify in the operating record one of the following statistical methods to be used in evaluating groundwater monitoring data for each hazardous constituent. The statistical test chosen shall be conducted separately for each hazardous constituent in each well.

(a) A parametric analysis of variance (ANOVA) followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and

testing of the contrasts between each compliance well's mean and the background mean levels for each constituent.

(b) An analysis of variance (ANOVA) based on the ranks followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's median and the background median levels for each constituent.

(c) A tolerance or prediction interval procedure in which an interval for each constituent is established from the distribution of the background data, and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.

(d) A control chart approach that gives control limits for each constituent.

(e) Another statistical method that meets the requirements of Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities Unified Guidance (EPA-530-R-09-007 March 2009).

(19) Any statistical method chosen under paragraph (18) of this Rule shall comply with the following performance standards, as appropriate:

(a) The statistical method used evaluate groundwater monitoring data shall be appropriate for the distribution of chemical parameters or hazardous constituents. If the distribution of the chemical parameters or hazardous constituents is shown by the owner or operator to be inappropriate for a normal theory test, then the data should be transformed or a distribution-free theory test should be used. If the distributions for the constituents differ, more than one statistical method may be needed.

(b) If an individual well comparison procedure is used to compare an individual compliance well constituent concentration with background constituent concentrations or a groundwater protection standard, the test shall be done at a Type I error level no less than 0.01 for each testing period. If a multiple comparisons procedure is used, the Type I experiment wise error rate for each testing period shall be no less than 0.05; however, the Type I error of no less than 0.01 for individual well comparisons must be maintained. This performance standard does not apply to tolerance intervals, prediction intervals, or control charts.

(c) If a control chart approach is used to evaluate groundwater monitoring data, the specific type of control chart and its associated parameter values shall be protective of human health and the environment. The parameters shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.

(d) If a tolerance interval or a predictional interval is used to evaluate groundwater monitoring data, the levels of confidence and, for tolerance intervals, the percentage of the population that the interval must contain, shall be protective of human health and the environment. These parameters shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.

(e) The statistical method shall account for data below the limit of detection with one or more statistical procedures that are protective of human health and the environment. Any practical quantitation limit (pql) that is used in the statistical method shall be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility.

(f) If necessary, the statistical method shall include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.

(20) The owner or operator must determine whether or not there is a statistically significant increase over background values for each parameter or constituent required in the particular groundwater monitoring program that applies to the MSWLF unit, as determined in paragraphs (21) or (24) of this Rule.

(a) In determining whether a statistically significant increase has occurred, the owner or operator must compare the groundwater quality of each parameter or constituent at each monitoring well designated pursuant to subparagraph (8)(b) of this Rule to the background value of that constituent, according to the statistical procedures and performance standards specified under paragraphs (18) and (19) of this Rule.

(b) Within a reasonable period of time after completing sampling and analysis, the owner or operator must determine whether there has been a statistically significant increase over background at each monitoring well.

(21) Detection Monitoring. Detection monitoring is required at MSWLF units at all groundwater monitoring wells defined in subparagraphs (8)(a) and (b) of this Rule. At a minimum, a detection monitoring program must include the monitoring for the constituents listed in Appendix I of this Rule.

(a) The Director may delete any of the Appendix I monitoring parameters for a MSWLF unit if it can be shown that the removed constituents are not reasonably expected to be contained in or delivered from the waste contained in the unit.

(b) The Director may establish an alternative list of inorganic indicator for a MSWLF unit, in lieu of some or all of the heavy metals (constituents 1-15 in Appendix I to this Rule), if the alternative parameters provide a reliable indication of inorganic releases from the MSWLF unit to the groundwater. In determining alternative parameters, the Director shall consider the following factors:

1. The types, quantities, and concentrations of constituents in wastes managed at the MSWLF unit;
2. The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the MSWLF unit;
3. The detectability of indicator parameters, waste constituents, and reaction products in the groundwater; and
4. The concentration or values and coefficients of variation of monitoring parameters or constituents in the groundwater background.

(c) After the effective date of the Rule, owners and operators of MSWLs and Commercial Industrial Landfills must add Appendix III to their detection monitoring parameters before the initial receipt of CCR. MSWLs and Commercial Industrial Landfills that accepted CCR before the effective date of the Rule must incorporate the Appendix III constituents into their monitoring plan by minor modification within 180 days from the effective date of the Rule.

(d) The Director will not delete parameters or establish alternate parameter lists discussed under subparagraphs (21)(a) and (b) for those facilities accepting CCR wastes.

(e) The Director may require additional parameters based on waste descriptions.

(22) The monitoring frequency for all constituents listed in Appendix I to this Rule, or in the alternative list approved in accordance with subparagraph (21)(b) of this Rule, shall be at least semiannual during the active life of the facility (including closure) and the post-closure care period. A minimum of four independent samples from each well (background and downgradient) must be collected and analyzed for the Appendix I constituents, or the alternative list approved in accordance with subparagraph (21)(b) of this

Rule, during the first semiannual sampling event. At least one sample from each well (background and downgradient) must be collected and analyzed during subsequent semiannual sampling events. The Director may specify an appropriate alternative frequency for repeated sampling and analysis for Appendix I constituents, or the alternative list approved in accordance with subparagraph (21)(b) of this Rule, during the active life (including closure) and the post-closure care period. The alternative frequency during the active life (including closure) shall be no less than annual. The alternative frequency shall be based on consideration of the following factors:

(a) Lithology of the aquifer and unsaturated zone;
(b) Hydraulic conductivity of the aquifer and unsaturated zone;
(c) Groundwater flow rates;
(d) Minimum distance between upgradient edge of the MSWLF unit and downgradient monitoring well screen (minimum distance of travel); and
(e) Resource value of the aquifer.

(23) If the owner or operator determines, pursuant to paragraph (18) of this Rule, that there is statistically significant increase over background for one or more of the constituents listed in Appendix I to this Rule, or in the alternative list approved in accordance with subparagraph (21)(b) of this Rule, at any monitoring well at the boundary specified under subparagraph (8)(b) of this Rule, the owner or operator:

(a) Must, within 14 days of this finding, place a notice in the operating record indicating which constituents have shown statistically significant changes from background levels, and notify the Director that this notice was placed in the operating record; and

(b) Must establish an assessment monitoring program meeting the requirements of paragraphs (20) through (33) of this Rule within 90 days except as provided for in subparagraph (23)(c) of this Rule.

(c) The owner/operator may demonstrate that a source other than a MSWLF unit caused the contamination or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. A report documenting this demonstration must be certified by a qualified groundwater scientist or approved by the Director and be placed in the operating record. If a successful demonstration is made and documented, the owner or operator may continue detection monitoring as specified in paragraphs (22) and (23) of this Rule. If, after 90 days, a successful demonstration is not made, the owner or operator must initiate an assessment monitoring program as required in paragraphs (24) through (33) of this Rule.

(24) Assessment Monitoring Program. Assessment monitoring is required whenever a statistically significant increase over background has been detected for one or more of the constituents listed in Appendix I or in the alternative list approved in accordance with subparagraph (21)(b) of this Rule.

(25) Within 90 days of triggering an assessment monitoring program, and annually thereafter, the owner or operator must sample and analyze the groundwater for all constituents identified in Appendix II of this Rule. A minimum of one sample from each downgradient well must be collected and analyzed during each sampling event. For any constituent detected in the downgradient wells as the result of the complete Appendix II analysis, a minimum of four independent samples from each well (background and downgradient) must be collected and analyzed to establish background for the new constituents. The Director may specify an appropriate subset of wells to be sampled and analyzed for Appendix II constituents during assessment monitoring. The Director may delete any of the Appendix II monitoring parameters for a MSWLF unit if it can be shown that the removed constituents are not reasonably expected to be in or derived from the waste contained in the unit. Owners and operators of MSWLs and Commercial Industrial Landfills that will accept CCR after the effective date of the Rule must include Appendix IV in the assessment monitoring parameters before the initial receipt of CCR. MSWLs and Commercial Industrial Landfills that accepted CCR before the effective date of the Rule and with known releases must incorporate

Appendix IV constituents into their monitoring plans by minor modification within 180 days from the effective date of the Rule.

(26) The Director may specify an appropriate alternate frequency for repeated sampling and analysis for the full set of Appendix II constituents required by paragraph (25) of this Rule, during the active life (including closure) and post-closure care of the unit considering the following factors:

(a) Lithology of the aquifer and unsaturated zone;
(b) Hydraulic conductivity of the aquifer and unsaturated zone;
(c) Groundwater flow rates;
(d) Minimum distance between upgradient edge of the MSWLF unit and downgradient monitoring well screen (minimum distance of travel);
(e) Resource value of the aquifer; and
(f) Nature (fate and transport) of any constituents detected in the response to this Rule.

(27) After obtaining the results from the initial or subsequent sampling events required in paragraph (25) of this Rule, the owner or operator must:

(a) Within 14 days, place a notice in the operating record identifying the Appendix II constituents that have been detected and notify the Director that this notice has been placed in the operating record;

(b) Within 90 days, and on at least a semiannual bas is thereafter, resample all wells specified by paragraph (8) of this Rule, conduct analyses for all constituents in Appendix I to this Rule or in the alternative list approved in accordance with subparagraph (21)(b) of this Rule and for those constituents in Appendix II to this Rule that are detected in response to paragraph (25) of this Rule, and record their concentrations in the facility operating record. At least one sample from each well (background and downgradient) must be collected and analyzed during these sampling events. The Director may specify an alternative monitoring frequency during the active life (including closure) and the post-closure care period for the constituents referred to in this paragraph. The alternative frequency for Appendix I constituents, or the alternative list approved in accordance with subparagraph (21)(b) of this Rule during the active life (including closure) shall be no less than annual. The alternative frequency shall be based on consideration of the factors specified in paragraph (26) of this Rule;

(c) Establish background concentrations for any constituents detected pursuant to paragraph (25) or subparagraph (27)(b) of this Rule; and

(d) Establish groundwater protection standards for all constituents detected pursuant to paragraph (25) or (27) of this Rule. The groundwater protection standards shall be established in accordance with paragraph (31) or (32) of this Rule.

(28) If the concentrations of all Appendix II constituents are shown to be at or below background values, using the statistical procedures in paragraph (18) of this Rule, for two consecutive sampling events, the owner or operator must notify the Director of this finding and may return to detection monitoring.

(29) If the concentrations of any Appendix II constituents are above background values, but all concentrations are below the groundwater protection standard established under paragraphs (31) or (32) of this Rule , using the statistical procedures in paragraph (18) of this Rule , the owner or operator must continue assessment monitoring in accordance with this section.

(30) If one or more Appendix II constituents are detected at statistically significant levels above the groundwater protection standard established under paragraph (31) or (32) of this Rule in any event, the owner or operator must, within 14 days of this finding, place a notice in the operating record identifying the Appendix II

constituents have exceeded the groundwater protection standard and notify the Director and all appropriate local government officials that the notice has been placed in the operating record. The owner or operator also:

(a) Must characterize the nature and extent of the release by installing additional monitoring wells as necessary;

(b) If the point of compliance is not at the facility boundary, the owner/operator must install at least one additional monitoring well at the facility boundary in the direction of contaminant migration and sample this well in accordance with subparagraph (27)(b) of this Rule.

(c) Must notify all persons who own the land or res ide on the land that directly over lies any part of the plume of contamination if contaminants have migrated off-site if indicated by sampling of wells in accordance with subparagraph (30)(a) of this Rule; and

(d) Must initiate an assessment of corrective measures as required by paragraphs (34) through (37) of this Rule within 90 days; or

(e) May demonstrate that a source other than a MSWLF unit caused the contamination, or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. A report documenting this demonstration must be certified by a qualified groundwater scientist or approved by the Director and placed in the operating record. If a successful demonstration is made the owner or operator must continue monitoring in accordance with the assessment monitoring program pursuant to paragraphs (24) through (33) of this Rule and may return to detection monitoring if the Appendix II constituents are at or below background as specified in paragraph (28) of this Rule. Until a successful demonstration is made, the owner or operator must comply with subparagraph (30)(a) and (e), including initiating an assessment of corrective measures.

(31) The owner or operator must establish a groundwater protection standard for each Appendix II constituent detected in the groundwater. The groundwater protection standard shall be:

(a) For constituents for which a maximum contaminant level (MCL) has been promulgated under section 1412 of the Safe Drinking Water Act (codified) under 40 CFR part 141, the MCL for that constituent;

(b) For constituents for which MCLs have not been promulgated, the background concentration for the constituent established from wells in accordance with subparagraph (8)(a) of this Rule; or

(c) For constituents for which the background level is higher than the MCL identified under subparagraph (31)(a) of this Rule or health based levels identified under subparagraph (32)(a) of this Rule, the background concentration.

(32) The Director may establish an alternative groundwater protection standard for constituents for which MCLs have not been established. These groundwater protection standards shall be appropriate health based levels that satisfy the following criteria:

(a) The level is derived in a manner consistent with applicable state and federal guidelines for assessing the health risks of environmental pollutants (51 Fed. Reg. 33992, 34006, 34014, 34028; September 24, 1986).

(b) The level is based on scientifically valid studies conducted in accordance with the Toxic Substances Control Act Good Laboratory Practice Standards (40 CFR part 792) or equivalent;

(c) For carcinogens, the level represents a concentration associated with an excess lifetime cancer risk level (due to continuous lifetime exposure) within the 1×10 -4 to 1×10-6 range; and

(d) For systemic toxicants, the level represents a concentration to which the human population (including sensitive subgroups) could be exposed to on a daily basis that is likely to be without appreciable risk of deleterious effects during a lifetime. For purposes of this paragraph, systemic toxicants include toxic chemicals that cause effects other than cancer or mutation.

(33) In establishing groundwater protection standards under paragraph (32) of this Rule, the Director may consider the following:

(a) Multiple contaminants in the groundwater;
(b) Exposure threats to sensitive environmental receptors; and
(c) Other site-specific exposure or potential exposure to groundwater.

(34) Assessment of Corrective Measures. Within 90 days of finding that any of the constituents listed in Appendix II have been detected at a statistically significant level exceeding the groundwater protection standards defined in paragraph (31) or (32) of this Rule, the owner or operator must initiate an assessment of corrective measures. Such an assessment must be completed within a reasonable period of time.

(35) The owner or operator must continue to monitor in accordance with the assessment monitoring program as specified in paragraphs (24) through (33) of this Rule.

(36) The assessment shall include an analysis of the effectiveness of potential corrective measures in meeting all of the requirements and objectives of the remedy as described in paragraphs (38) through (43) of this Rule addressing at least the following:

(a) The performance, reliability, ease of implementation, and potential impacts of appropriate potential remedies, including safety impacts, cross media impacts, and control of exposure to any residual contamination;
(b) The time required to begin and complete the remedy;
(c) The cost of remedy implementation; and
(d) Other environmental or public health requirements that may substantially affect implementation of the remedy(s).
(e) Local, state or federal permit requirements.

(37) The owner or operator must discuss the results of the corrective measures assessment, prior to the selection of remedy, in a public meeting with interested and affected parties.

(38) Selection of Remedy. Based on the results of the corrective measures assessment conducted under paragraphs (34) through (37) of this Rule, the owner or operator must select a remedy that, at a minimum, meets the standards listed in paragraph (39) of this Rule and develop a Corrective Action Plan (CAP) for implementation of the remedy. The owner or operator must notify the Director, within 14 days of selecting a remedy, that. The owner or operator must notify the Director, within 14 days of selecting a remedy, that a report describing the selected remedy has been placed in the operating record and how it meets the standards in paragraph (39) of this Rule.

(39) Remedies must:

(a) Be protective of human health and the environment;

(b) Attain the groundwater protection standard as specified pursuant to paragraph (31) or (32) of this Rule.

(c) Control the source(s) of releases so as to reduce or eliminate, to the maximum extent practicable, further releases of Appendix II constituents into the environment that may pose a threat to human health or the environment; and

(d) Comply with standards for management of wastes as specified in paragraph (47) of this Rule.

(40) In selecting a remedy that meets the standards of paragraph (31) of this Rule, the owner or operator s hall consider the following evaluation factors:

(a) The long- and short-term effectiveness and protectiveness of the potential remedy(s), along with the degree of certainty that the remedy will prove successful based on consideration of the following:

1. Magnitude of reduction of existing risks;

2. Magnitude of residual risks in terms of likelihood of further releases due to waste remaining following implementation of a remedy;

3. The type and degree of long-term management required, including monitoring, operation, and maintenance;

4. Short-term risks that might be posed to the community, workers, or the environment during implementation of such a remedy, including potential threats to human health and the environment associated with excavation, transportation, and redisposal or containment;

5. Time until full protection is achieved;

6. Potential for exposure of humans and environmental receptors to remaining wastes, considering the potential threat to human health and the environment associated with excavation, transportation, redisposal, or containment;

7. Long-term reliability of the engineering and institutional controls; and

8. Potential need for replacement of the remedy.

(b) The effectiveness of the remedy in controlling the source to reduce further releases based on consideration of the following factors;

1. The extent to which containment practices will reduce further releases;

2. The extent to which treatment technologies may be used.

(c) The ease or difficulty of implementing a potential remedy(s) based on consideration of the following types of factors:

1. Degree of difficulty associated with construction the technology;

2. Expected operational reliability of the technologies;

3. Need to coordinate with and obtain necessary approvals and permits from other agencies;

4. Availability of necessary equipment and specialists; and

5. Available capacity and location of needed treatment, storage, and disposal services.

(d) Practicable capability of the owner or operator, including a consideration of the technical and economic capability.

(e) The degree to which community concerns are addressed by a potential remedy(s). (41) The owner or operator shall specify as part of the selected remedy a schedule(s) for initiating and completing remedial activities. Such a schedule must require the initiation of remedial activities within a reasonable period of time taking into consideration the factors set forth in subparagraphs (41)(a) through(h) of this Rule. The owner or operator must consider the following factors in determining the schedule or remedial activities.

(41) The owner or operator shall specify as part of the selected remedy a schedule(s) for initiating and completing remedial activities. Such a schedule must require the initiation of remedial activities within a reasonable period of time taking into consideration the factors set forth in subparagraphs (41)(a) through(h) of this Rule. The owner or operator must consider the following factors in determining the schedule or remedial activities.

(a) Extent and nature of contamination;

(b) Practical capabilities of remedial technologies in achieving compliance with groundwater protection standards established in paragraph (31) or (32) of this Rule and other objectives of the remedy;

(c) Availability of treatment or disposal capacity for wastes managed during implementation of the remedy;

(d) Desirability of utilizing technologies that are not currently available, but which may offer significant advantages over already available technologies in terms of effectiveness, reliability, safety, or ability to achieve remedial objectives.

(e) Potential risks to human health and the environment from exposure to contamination prior to completion of the remedy;

(f) Resource value of the aquifer including:

1. Current and future uses;
2. Proximity and withdrawal rate of users;
3. Groundwater quantity and quality;
4. The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;
5. The hydrologic characteristic of the facility and surrounding land;
6. Groundwater removal and treatment costs; and
7. The cost and availability of alternative water supplies.

(g) Practicable capability of the owner or operator.

(h) Other relevant factors.

(42) The Director may determine that remediation of a release of an Appendix II constituent from a MSWLF unit is not necessary if the owner or operator demonstrates to the satisfaction of the Director that:

(a) The groundwater is additionally contaminated by substances that have originated from a source other than a MSWLF unit and those substances are present in concentrations such that cleanup of the release from the MSWLF unit would provide no significant reduction in risk to actual or potential receptors; or

(b) The constituent(s) is present in groundwater that:

1. Is not currently or reasonably expected to be a source of drinking water; and
2. Is not hydraulically connected with waters to which the hazardous constituents are migrating or are likely to migrate in a concentration(s) that would exceed the groundwater protection standards established under paragraph (31) or (32) of this Rule; or

(c) Remediation of the release(s) is technically impracticable; or

(d) Remediation results in unacceptable cross-media impacts.

(43) A determination by the Director pursuant to paragraph (42) of this Rule shall not affect the authority of the state to require the owner or operator to undertake source control measures or other measures that may be necessary to eliminate or minimize further releases to the groundwater, to prevent exposure to the groundwater, or to remediate the groundwater to concentrations that are technically practicable and significantly reduce threats to human or the environment.

(44) Implementation of the Corrective Action Program. Based on the schedule established under paragraph (41) of this Rule for initiation and completion of remedial activities, the owner or operator must:

(a) Establish and implement a corrective action groundwater monitoring program that;

1. At a minimum, meets the requirements of an assessment monitoring program under paragraphs (24) through (33) of this Rule;
2. Indicates the effectiveness of the corrective action remedy; and
3. Demonstrates compliance with groundwater protection standard pursuant to paragraph (48) of this Rule.

(b) Implement the corrective action remedy selected under paragraphs (38) through (43) of this Rule; and

(c) Take any interim measures necessary to ensure the protection of human health and the environment. Interim measures should, to the greatest extent practicable, be consistent with the objectives of and contribute to the performance of any remedy that may be required pursuant to paragraphs (28) through (43) of this Rule. The following factors must be considered by an owner or operator in determining whether interim measures are necessary.

1. Time required to develop and implement a final remedy;

2. Actual or potential exposure of nearby populations or environmental receptors to hazardous constituents;

3. Actual or potential contamination of drinking water supplies or sensitive ecosystems;

4. Further degradation of the groundwater that may occur if remedial action is not initiated expeditiously;

5. Weather conditions that may cause hazardous constituents to migrate or be released;

6. Risks of fire or explosion, or potential for exposure to hazardous constituents as a result of an accident or failure of a container or handling system; and

7. Other situations that may pose threats to human health and the environment.

(45) An owner or operator may determine, based on information developed after implementation of the remedy has begun or other information, that compliance with requirements paragraph (31) of this Rule are not being achieved through the remedy selected. In such cases, the owner or operator must implement other methods or techniques that could practicably achieve compliance with the requirements, unless the owner or operator makes the determination under paragraph (46) of this Rule.

(46) If the owner or operator determines that compliance with requirements under paragraph (31) of this Rule cannot be practically achieved with any currently available methods, the owner or operator must:

(a) Obtain certification of a qualified groundwater scientist or approval by the Director that compliance with requirements under paragraph (31) of this Rule cannot be practically achieved with any currently available methods;

(b) Implement alternate measures to control exposure of humans or the environment to residual contamination, as necessary to protect human health and the environment; and

(c) Implement alternate measures for control of the sources of contamination, or for removal or decontamination of equipment, units, devices, or structures that are:

1. Technically practicable; and
2. Consistent with the overall objective of the remedy.

(d) Notify the Director within 14 days that a report justifying the alternative measures prior to implementing the alternative measures has been placed in the operating record.

(47) All solid wastes that are managed pursuant to a remedy required in paragraphs (38) through (43) of this Rule, or an interim measure required in paragraph (44)(c) of this Rule, shall be managed in a manner:

(a) That is protective of human health and the environment; and
(b) That complies with applicable state Solid and Hazardous Waste Management Rules and federal Solid and Hazardous Waste Management Rules.

(48) Remedies selected pursuant to paragraphs (38) through (43) of this Rule shall be considered complete when:

(a) The owner or operator complies with the groundwater protection standards established under paragraph (31) or (32) of this Rule at all points within the plume of contamination that lie beyond the groundwater monitoring well system established under paragraph (8) of this Rule.

(b) Compliance with the groundwater protection standards established in paragraph (30) or (31) of this Rule has been achieved by demonstrating that concentrations of Appendix II constituents have not exceeded the groundwater protection standard(s) for a period of three consecutive years using the statistical procedures and performance standards in paragraphs (18) and (19) of this Rule. The Director may specify an alternative length of time during which the owner or operator must demonstrate that concentrations of Appendix II constituents have not exceeded the groundwater protection standard(s) taking into consideration:

1. Extent and concentration of the release(s);

2. Behavior characteristics of the hazardous constituents in the groundwater;
3. Accuracy of monitoring or modeling techniques, including any seasonal, meteorological, or other environmental variabilities that may affect the accuracy; and
4. Characteristics of the groundwater.

(c) All actions required to complete the remedy have been satisfied.

(49) Upon completion of the remedy, the owner or operator must notify the Director within 14 days that a certification that the remedy has been completed in compliance with the requirements of paragraph (48) of this Rule has been placed in the operating record. The certification must be signed by the owner or operator and by a professional geologist, geotechnical or professional engineer registered to practice in Georgia and approved by the Director.

(50) When upon completion of the certification, the owner or operator determines that the corrective action remedy has been completed in accordance with the requirements in paragraph (48) of this Rule, the owner or operator shall be released from the requirements for financial assurance for corrective action under Rule 391-3-4-.13.

Authority: O.C.G.A. §. 12-8-20 et seq., as amended.

Rule 391-3-4-.15 Biomedical Waste

(1) All persons subject to regulation under Rule .15 shall, in addition to the requirements of Rule .15, handle biomedical waste in accordance with the provisions of O.C.G.A. 12-8-20, et seq., and the Rules for Solid Waste Management, Chapter 391-3-4 applicable to solid waste.

(2) Biomedical waste shall mean and include the following:

(a) Pathological waste, which means all recognizable human tissues and body parts except teeth which are removed during surgery, obstetrical procedures, autopsy, and laboratory procedures.

(b) Biological waste, which means blood and blood products, exudates secretions, suctionings, and other body fluids which contains free liquids and cannot be or are not directly discarded into a municipal sewer system.

(c) Cultures and stocks of infectious agents and associated biologicals including cultures from medical and pathological laboratories, cultures and stocks of infectious agents from research and industrial laboratories, wastes from the production of biologicals, discarded live and attenuated vaccines, and culture dishes and devices used to transfer, inoculate, and mix cultures.

(d) Contaminated animal carcasses, body parts, their bedding, and other wastes from such animals which are infected with or which have been exposed to infectious agents, capable of causing disease in man.

(e) Sharps, which means any discarded article that may cause punctures or cuts. Such waste includes, but is not limited to, items such as needles, IV tubing and syringes with needles attached, and scalpel blades.

(f) Chemotherapy waste, which means any disposable material which has come in contact with cytotoxic/antineoplastic agents (agents toxic to cells) and/or antineoplastic agents (agents that inhibit or prevent the growth and spread of tumors or malignant cells) during the preparation, handling, and administration of such agents. Such waste includes, but is not limited to, masks, gloves, gowns, empty IV tubing bags and vials, and other contaminated materials. The above waste must first be classified as empty which means such quantity that it is not subject to other federal or state waste management regulations prior to being handled as biomedical waste.

(g) Discarded medical equipment and parts, excluding expendable supplies and materials included in paragraphs (a) through (f) of this Rule, which have not been decontaminated, and that were in contact with infectious agents.

(3) Generation of Biomedical Waste.

(a) Unless otherwise exempted, Rule 391-3-4-.15 shall apply to all persons generating or handling biomedical waste, including but not limited to: ambulatory service centers, blood banks, clinics, county health departments, dental offices, funeral homes, health maintenance organizations (HMOs), hospitals, laboratories, medical buildings, physicians offices, veterinary offices, research and manufacturing facilities, nursing homes, and biomedical waste transportation, storage, treatment, and disposal facilities.

(b) Partial exemption: facilities which generate less than 100 pounds per month of biomedical waste shall be exempt from all provisions of Rule 391-3-4-.15except that they shall comply fully with the provisions of Rule 391-3-4-.15(4)(a), (4)(b), (4)(b) 1., (4)(b)2., (4)(c), (6)(c), and (7)(b). For purposes of this Rule, a

facility is defined as one or more persons generating biomedical waste who share common waste management services including, but not limited to, bulk storage containers.

(c) Total exemption: in no case shall a person be generator of biomedical waste if those wastes are generated from single-family residential premises or a single-family dwelling unit in the self-care and treatment of family members living in those premises or units and disposed of as residential solid waste. Home health care organizations or physicians treating patients in a home are not exempt unless otherwise exempted in (b) above.

(d) All requirements of this Rule shall apply to persons or facilities who generate 100 pounds or more biomedical waste per month.

(4) Storage and Containment of Biomedical Waste.

(a) Containment of biomedical waste shall be a manner and location which affords protection from animals, rain and wind, does not provide a breeding place or a food source for insects and rodents, and minimizes exposure to the public.

(b) Biomedical waste shall be segregated by separate containment from other waste at the point of origin.

1. Biomedical waste, except for sharps, shall be placed in containers which are impervious to moisture and have a strength sufficient to preclude ripping, tearing, or bursting under normal conditions of use. The containers shall be securely closed so as to prevent leakage or expulsion of solid or liquid wastes during storage, handling, or transport.

2. Sharps shall be contained for storage, transportation, treatment and subsequent disposal in leakproof, rigid, puncture-resistant containers which are taped closed or tightly lidded to preclude loss of contents.

(c) Rigid containers of discarded sharps and all other disposable containers used for containment of biological waste shall be red or orange in color or clearly identified with the universal biohazard symbol or clearly marked with the word "Biohazard".

(d) Biomedical waste contained in disposable containers as prescribed above, shall be placed for storage, handling, or transport in disposable or reusable pails, cartons, boxes, drums, dumpsters, or portable bins. The containment system shall have a tight fitting cover and be kept clean and in good repair. The containers may be of any color and shall be conspicuously labeled with the universal biohazard symbol and the word "Biohazard" on the sides so as to be readily visible from any lateral direction when the container is upright.

1. Reusable containers used for shipment of biomedical waste shall be thoroughly washed and decontaminated each time they are emptied.

2. Reusable pails, drums, dumpsters or bins used for containment of biomedical waste shall not be used for other purposes except after being decontaminated by procedures as described in (4)(d)1. above and after the universal biohazard symbol and word "Biohazard" are removed.

(5) Transfer of Biomedical Waste to Off-Site Treatment or Disposal Facilities.

(a) Any generator of biomedical waste shall transfer custody of the waste only to a collector who is operating under authority of these Rules.

(b) Biomedical waste shall not be transported in the same vehicle with other solid waste unless the biomedical waste is contained in a separate, fully enclosed leakproof container within the vehicle compartment or unless all of the waste is to be treated as biomedical waste in accordance with the requirements of these Rules.

(c) Biomedical waste shall be delivered for storage, including intermediate transfer, and treatment only to *a facility or location for which there is a valid and appropriate operating permit as set forth in these Rules.*

(d) Surfaces of transport vehicles that have contacted spilled or leaked biomedical waste shall be decontaminated.

(e) Equipment used to transport waste from the generator to the off-site treatment or disposal facility may not destroy the integrity of the container.

(f) Vehicles used for the transport of biomedical waste shall not be used for transportation of food or food products.

(6) Treatment of Biomedical Waste.

(a) If treated in accordance with the following procedures, the waste shall no longer be considered biomedical waste and may be combined and handled with regular solid waste. Biomedical waste shall be treated by one of the following methods prior to disposal at a permitted waste disposal facility.

1. Incineration in the thermal treatment technology facility which provides complete combustion of waste to render it nonpathogenic.

(i) Biomedical waste thermal treatment technology facilities shall be capable of maintaining a minimum temperature in the primary chamber sufficient to destroy infectious agents and procedure a residue essentially free of odors and unstable organic matter. If chemotherapy wastes are incinerated, the facility must be capable of maintaining a minimum of 1,800 degrees Fahrenheit in the secondary combustion chamber and a minimum residence time of two seconds.

(ii) Atmospheric emissions shall be controlled so as not to exceed air quality standards of the Division.

2. Decontamination by heating with steam under pressure (autoclave) so as to render the biomedical waste noninfectious.

(i) A recording thermometer shall be used during each complete cycle to ensure the attainment of a temperature of 121 degrees Centigrade (250 degrees Fahrenheit) for one-half hour or longer in order to achieve decontamination of the entire load.

(ii) Monitoring of the steam sterilization process shall be required in order to confirm the attainment of decontamination.

(iii) Monitoring may be through the use of biological indicators or other methods as approved by the Director. Indicators used to ensure the attainment of the proper temperature during steam sterilization shall be placed at the point of the load where the rate of thermal penetration is at a minimum.

3. Other methods as may be approved by the Director.

(b) Fluid or semisolid waste specified in (2)(b) of this Rule may be discharged to a sewage treatment system that provides secondary treatment of waste if approved by the agency responsible for the operation of the sewage treatment system.

(c) Biomedical wastes consisting of recognizable human anatomical remains shall not be disposed of by landfilling.

(d) Chemotherapy waste, as defined in (2)(f), shall be treated at a permitted thermal treatment technology facility or other facility approved by the Director. Steam decontamination may not be used for the treatment of chemotherapy waste.

(e) All facilities treating regulated quantities of biomedical waste must, at a minimum, comply with the above criteria. Commercial biomedical waste treatment facilities may not construct or operate a biomedical waste treatment facility without first obtaining a solid waste handling permit under these Rules. On-site biomedical waste treatment facilities are required to obtain a solid waste permit-by-Rule, and must comply with the provisions of paragraph (6)(a)-(d) of this Rule, in addition to Rule 391-3-4-.06. For purposes of this Rule, "Commercial biomedical waste treatment facility" means a facility which accepts over 25 percent of its biomedical waste from other, off-site, facilities, which are not owned by the facility owning the treatment or disposal facility, generally for a fee.

(7) Disposal of Biomedical Waste.

(a) Biomedical wastes treated in accordance with the provisions in Rule 391-3-4-.15(6), shall be properly disposed of at a facility permitted under the authority of these Rules unless otherwise approved by the Director.

(b) Biomedical waste from generators of less than 100 pounds per month shall be properly disposed of at a municipal solid waste landfill or treatment facility permitted under authority of these Rules or other facilities approved by the Director.

(c) The disposal of untreated biomedical waste, from generators of more than 100 pounds per month, by landfilling is prohibited.

Cite as Ga. Comp. R. & Regs. R. 391-3-4-.15
Authority: O.C.G.A. Secs. 12-8-20et seq., 12-8-23.
History. Original Rule entitled "Biomedical Waste" was F. Jun. 9, 1989; eff. Jun. 29, 1989.
Amended: F. Sept. 4, 1991; eff. Sept. 24, 1991.
Amended: F. Jun. 7, 1993; eff. Jun. 27, 1993.
Original Rule entitled "Biomedical Waste" was F. Jun. 9, 1989; eff. Jun. 29, 1989.
Amended: F. Sept. 4, 1991; eff. Sept. 24, 1991.
Amended: F. Jun. 7, 1993; eff. Jun. 27, 1993.

Rule 391-3-4-.16 Composting, Mulching and Anaerobic Digestion Facilities

(1) Composting is a desirable means of reducing the amount of solid waste destined for disposal. All composting facilities not exempted in 391-3-4-.16(3) shall either be regulated under Permit-by-Rule in 391-3-4-.16(5)(b) or shall obtain a Solid Waste Handling Permit in accordance with either 391-3-4-.16(5)(c), 391-3-4-.16(5)(d), 391-3-4-.16(5)(e), or 391-3-4-.16(5)(f) depending on the technology employed and feedstocks processed.

(a) Composting facilities in existence on the effective date of this Rule may continue to operate until March 31, 2015 under their existing permit, or Permit-by-Rule, before demonstrating compliance under conditions (i) - (vii) of this section. Existing facilities requesting major modifications after the effective date of this Rule must fully comply with this Rule. Facilities that cannot demonstrate compliance with conditions (i) - (vii) of this section by March 31, 2015 shall initiate closure.

(i) Existing Permit-by-Rule composting facilities that meet the criteria of 391-3-4-.16(5)(b) 1. must comply with the operating standards of Class 2 Composting Facilities, but are exempted from the design standards of Class 2 Composting Facilities.

(ii) Existing permitted composting facilities that classify as Class 3 Composting Facilities in 391-3-4-.16(5)(c) 1. and 2. must comply with the operating standards of Class 3 facilities, but are exempted from the design standards of Class 3 facilities.

(iii) Existing permitted composting facilities that classify as Class 4 Composting Facilities in 391-3-4-.16(5)(d) 1. and 2. must comply with the operating standards of Class 3 and Class 4 facilities, but are exempted from the design standards of Class 3 and Class 4 facilities.

(iv) Existing permitted composting facilities that classify as Class 5 Composting Facilities in 391-3-4-.16(5)(e) 1. must comply with the operating standards of Class 3, Class 4, and Class 5 facilities, but are exempted from the design standards of Class 3, Class 4, and Class 5 facilities.

(v) Existing permitted composting facilities that classify as Class 6 In-vessel Composting and Anaerobic Digestion Facilities in 391-3-4-.16(5)(f) 1. must comply with the operating standards of Class 6 facilities, but are exempted from the design standards of Class 6 facilities.

(vi) All existing composting and anaerobic digestion facilities are exempt from the siting criteria of 391-3-4-.16(6), unless applying for a major modification as in 391-3-4-.16(7)(a) 1. or 2.

(vii) All existing composting and anaerobic digestion facilities, other than those operating as Permit-by-Rule facilities, must comply with the testing requirements of 391-3-4-.16(8).

(2) Definitions. For the purposes of this Rule:

(a) *"Aerated Static Pile Composting" means a process in which decomposing organic material is placed* in piles over an air distribution system to supply oxygen for the purpose of producing compost.

(b) "Agricultural Residuals" means the residuals from customary and generally accepted activities, practices, and procedures that farmers adopt, use, or engage in during the production and preparation for market of poultry, livestock, and associated farm products; and in the production and harvesting of agricultural crops, which include agronomic, horticultural, and silvicultural crops, and residuals resulting from aquacultural activities. It also includes residuals from harvesting and production of row crops and manures. The term does not include dead animals, wastewater or special wastes, such as waste oils or other lubricants, unused fertilizers, pesticides, or pesticide containers.

(c) "Anaerobic Digester" means an enclosed vessel that processes organic material under anaerobic conditions to produce biogas and digestate.

(d) "Anaerobic Digestion" means the controlled decomposition of organic material under anaerobic conditions in an anaerobic digester to produce biogas and digestate.

(e) "Backyard Composting" means composting of yard trimmings and food residuals, managed so as not to attract vectors, at residential, commercial, or industrial property by the owner or tenant for use on site. All feedstocks must be generated and composted on site.

(f) "Biogas" means gas generated by anaerobic digestion.

(g) "Compost" means a stabilized organic product produced by a controlled aerobic decomposition process that can be used as a soil additive, fertilizer, growth media or other beneficial use.

(h) "Composting Facility" means buildings, grounds and equipment dedicated to the manufacture of compost.

(i) "Contact Water" means a liquid that has passed through or emerged from raw feedstocks and materials that are being processed; liquid that has come into contact with equipment that is dedicated to the composting or anaerobic digestion process; and which contains extracted, dissolved or suspended materials. Contact water also includes condensate from gases resulting from the composting and the anaerobic digestion processes.

(j) "Curing" means, for the purposes of composting and anaerobic digestion, a continuation of the composting process after the high heat stage during which stability and maturity continue to increase. For the purposes of these regulations, compost enters the curing stage after completing the process to further reduce pathogens.

(k) "Digestate" means the residual solids or liquids remaining after organic material has been processed in an anaerobic digester.

(l) "Feedstock" means any organic material used in the production of mulch or compost or processed in an anaerobic digester. Feedstocks shall not include additives or amendments that are not part of the composting process.

(m) "Food Processing Residuals" means organic material generated as a by-product of the food-processing sector that is non-hazardous and contains no domestic wastewater. For the purposes of these regulations, the term applies to use as a feedstock in the composting or anaerobic digestion process and does not include dissolved air flotation (DAF) skimmings or fats, oil, and greases.

(n) "Food Residuals" means pre- and post-consumer food used as a feedstock in a composting or anaerobic digestion facility.

(o) "Industrial By-product" means organic materials generated by manufacturing or industrial processes that are non-hazardous, contain no domestic wastewater, and pass the paint filter test.

(p) "In-vessel Composting" means the aerobic decomposition of organic material in an enclosed container for the purpose of producing compost.

(q) "Maturity" means a measure of the degree of completion of the composting process.

(r) "Mulching" means the grinding, shredding or chipping of woody materials consisting of stumps, trees, limbs, branches, bark, leaves and other clean wood that has not undergone controlled aerobic decomposition to produce a stabilized organic product.

(s) "Source-separated Organics" means organic material including, but not limited to, food residuals, food processing residuals, and compostable paper that has been separated from non-compostable material.

(t) "Stability" means the inverse measure of the potential for a material to rapidly decompose that is measured by indicators of microbial activity, such as carbon dioxide production, oxygen uptake, or self-heating.

(3) Exemptions.

(a) The following mulching and composting operations are exempt from a Solid Waste Handling Permit:

1. Backyard composting.

2. A facility composting or mulching only Category A feedstock.

3. A facility processing less than 40 tons per year of food residuals generated on site and composted in leak-proof containers that prohibit vector attraction and prevent nuisance odor generation.

4. Composting of food residuals and yard trimmings generated on site at a K-12 institution for educational purposes.

5. Composting of biosolids at a treatment works regulated by a National Pollutant Discharge Elimination System (NPDES) permit, Land Application System (LAS) permit, or other permit from EPD, and in which case that permit has been modified in accordance with the Georgia Rules for Water Quality Control 391-3-6-.17(3)(c) 1. to incorporate any necessary requirements for regulating the composting operation.

6. Composting of dead animals, provided such composting is in accordance with the requirements of the Georgia Dead Animal Disposal Act (O.C.G.A. § 4-5) and Georgia Department of Agriculture Rules (Chapter 40-13-5).

7. Anaerobic digestion facilities that are permitted in accordance with the Georgia Rules for Water Quality Control. These include facilities located at a wastewater treatment plant and on-farm anaerobic digesters or lagoons.

8. Manures managed in accordance with the Georgia Rules for Water Quality Control.

(4) Feedstock Categories.

(a) The categories described below are not intended to be all-inclusive. Case-by-case determinations by the Division may be necessary concerning selection of the appropriate category for a particular feedstock, including industrial by-products not elsewhere classified. Accordingly, the Division may require that analytical and/or process information be supplied by the owner or operator to assist in making such determinations. At a minimum, the Division will require applicants to provide an analysis of metals and proof of compostability of the potential feedstock, including C:N ratio and soluble salts.

1. Feedstock Category A: Yard trimmings, land-clearing debris, agricultural residuals generated and processed on site, untreated and unpainted wood, or any combination thereof.

2. Feedstock Category B: Agricultural residuals generated off site, herbivorous animal manure generated at a zoo, and/or source-separated organics.

3. Feedstock Category C: Sewage sludge and biosolids not managed as part of a treatment works under an NPDES or LAS permit.

4. Feedstock Category D: Dissolved air flotation (DAF) skimmings or sludge generated from food processing and dewatered septage.

(b) Prohibited feedstocks include:

1. Asbestos-containing wastes.
2. Biomedical wastes.
3. Painted and treated wood.
4. Any other prohibited wastes included in 391-3-4-.04(6).

(5) Design and Operating Standards for Composting Facilities by Class.

(a) Class 1 Composting and Mulching Facilities

1. Facilities composting, grinding, chipping, and/or mulching only Category A feedstock do not require a Solid Waste Handling Permit. A permitted solid waste handling facility shall submit a minor modification prior to adding a Class 1 composting operation on site.

(b) Class 2 Composting Facilities

1. Facilities composting Category A and B feedstocks that meet both of the following criteria may operate under a Permit-by-Rule for Composting Facilities:

(i) Facilities receiving less than 500 tons of Category B feedstock per calendar month.
(ii) For Class 2 facilities, Category B feedstocks shall be restricted to exclude the receipt of non-vegetative food processing residuals and manures.

2. The design standards for Class 2 facilities include:

(i) The composting area shall be constructed to maintain its structural integrity under operating conditions and be capable of supporting vehicular traffic.
(ii) The composting facility shall be adequate in size and capacity to manage the projected volume of compost and residue generated. The areas for storing feedstocks prior to processing shall be clearly defined and the maximum capacity specified.
(iii) For windrow operations, the maximum composting process windrow size and minimum composting process windrow spacing shall match the capability and requirements of the equipment used at the facility.

3. The operating standards for Class 2 facilities include:

(i) The composting facility shall have a sign at its entrance that lists the name of the facility, hours of operation, feedstocks accepted, and emergency contact information.

(ii) The composting facility shall have storm water control measures.

(iii) The composting facility shall prevent flow of contact water from the active composting area into surface water and curing or finished compost areas.

(iv) Suitable measures to control vectors shall be applied.

(v) Suitable measures to control odors shall be applied.

(vi) Suitable measures to prevent, control, and extinguish fires shall be applied.

(vii) By the end of each operating day, all incoming Category B feedstock must be processed into the active composting area, transferred to leak-proof containment, or mixed with bulking material and covered in a manner that minimizes nuisance odors and scavenging by vectors.

(viii) No material shall be stored in excess of the designated capacity.

(ix) Storage of finished compost on site is limited to 12 months, unless approved by the Division on a case-by-case basis.

(x) Non-compostable material and solid waste generated on site shall be stored in a waste container and then either recycled or disposed of at a permitted solid waste facility.

(xi) Facilities accepting Category B feedstocks from off site shall track incoming feedstocks and finished compost. Records documenting compliance of the composting facility with these Rules shall be kept for a minimum of three years in a form suitable for submission to or inspection by the Division. Records shall include the weight or volume (in tons or cubic yards) of the feedstocks accepted, total compost produced, and any amount sold or used. Records shall be retained at the composting facility unless an off- site storage location is approved by the Division.

(xii) Operation and management shall be under the supervision and control of an individual properly trained in the operation of such facilities at all times. Facility operations managers must be able to document training in the basics of composting facility operations.

(xiii) Notice of final closure shall be provided to the Director within 60 days from final receipt of feedstock. Any site not receiving feedstock in excess of 180 days, unless properly closed or otherwise approved by the Division, shall be deemed closed and in violation of these Rules. Notice of closure shall include documentation that all feedstocks and active, curing, and final compost materials have been removed from the facility and that the site has been stabilized in accordance with the Manual for Erosion and Sediment Control in Georgia.

(c) Class 3 Composting Facilities

1. Any composting facility that is neither exempt under 391-3-4-.16(3), nor meets the conditions for Class 2 Composting Facilities in 391-3-4-.16(5)(b), shall obtain a permit in accordance with following requirements:

2. Class 3 composting facilities may compost Category A and B feedstocks.

3. The design standards for Class 3 facilities include:

(i) The composting facility shall be designed by a professional engineer licensed to practice in Georgia.

(ii) An all-weather compost pad shall be designed, constructed, and maintained to (1) prevent ponding and impede downward migration of potential contaminants from contact water; (2) reliably transmit any free liquid present during the storage, treatment, and processing of

materials laterally to a containment structure to prevent liquids from entering surface water or groundwater; (3) support vehicular traffic; and (4) prevent conditions that could contribute to or cause contamination.

(iii) Surfaces on which composting takes place shall be graded with a slope between 2% and 6% to prevent ponding of water.

(iv) The site shall be graded to prevent the flow of water from the active composting area into curing or finished compost areas.

(v) Prior to receiving feedstocks, the Division shall be provided with written certification by a professional engineer licensed to practice in Georgia, that the facility has been constructed in accordance with the approved permit. Unless notified otherwise by the Division, within 15 days of receipt of the written certification, the facility owner or operator may commence composting operations.

(vi) The owner or operator shall fully satisfy all applicable financial responsibility requirements, as provided by Chapter 391-3-4-.13. The financial assurance mechanism shall be updated at least annually for inflation and for any modifications required and approved by the Division.

(vii) An as-built survey of the facility, prepared by a Georgia-registered professional surveyor, shall be submitted with the engineering certification.

(viii) Contact water collection and removal systems shall be designed for incorporating the liquid back into the compost piles or for removal and treatment in a manner approved by the Division. Contact water may be used in the composting operation for moisture addition only in active compost piles that have not completed the process to further reduce pathogens.

(ix) The maximum composting process windrow size and minimum composting process windrow spacing shall match the capability and requirements of the equipment used at the facility.

(x) The composting facility shall submit a site-specific odor minimization plan that includes, at a minimum, the following:

(I) A complaint response protocol.
(II) A description of operating procedures for minimizing odor.
(IV) A description of the processes and technologies used to control odors.
(IV) A description of procedures to monitor odor, including sampling frequencies and method(s) used to measure odors.

(xi) The composting facility shall submit a contingency plan detailing corrective or remedial actions to be taken in the event of equipment breakdown; odors; unacceptable waste delivered to the facility; spills; and other undesirable conditions such as fire, dust, noise, vectors, unusual traffic conditions, and litter. The plan shall also include the proposed emergency provisions for equipment breakdown or power failure.

4. The operating standards for Class 3 include:

(i) Operation and management shall be under the supervision and control of an individual properly trained in the operation of such facilities at all times. Facility operations managers must be able to document training in the basics of composting facility operations.

(ii) The facility shall install and maintain storm water management controls.

(iii) Suitable measures to control vectors shall be applied.

(iv) Suitable measures to prevent, control, and extinguish fires shall be applied.

(v) By the end of each operating day, all incoming Category B feedstock shall be processed into the active composting area, transferred to leak-proof containment, or mixed with bulking material and covered in a manner that minimizes nuisance odors and scavenging by vectors. Prior to being incorporated into the active composting area, feedstocks with free liquid shall be mixed with drier feedstocks, bulking material, or compost so that the liquid is promptly absorbed and not allowed to flow from the mixing area.

(vi) Compost processing time and temperatures shall be sufficient to kill weed seeds, reduce pathogens and vector attraction, and produce compost that meets the stability necessary for the intended use. Pathogen and vector attraction reduction compliance shall be achieved as follows:

(I) Windrow composting: The compost material shall be maintained at a minimum average temperature of 55°C or higher for 15 days or longer. During the period when the compost is maintained at 55°C or higher, there shall be a minimum of five turnings of the windrow. The 15 or more days at or above 55°C do not have to be continuous.

(II) Aerated static pile or in-vessel composting: The compost material shall be maintained at a minimum average temperature of 55°C or higher for three consecutive days, followed by at least 14 days at over 40°C with an average temperature of over 45°C.

(vii) Facilities using aerated static piles shall insulate piles to ensure that all parts of the decomposing material reach and maintain temperatures at or above 55°C for a minimum of three days.

(viii) The all-weather compost pad must be maintained to its specified slope and resist deformation that would cause ponding or increase infiltration of contact water.

(ix) Storage of finished compost on site is limited to 12 months, unless approved by the Division on a case-by-case basis.

(x) Non-compostable material and solid waste generated on site shall be stored in a waste container and then either recycled or disposed of at a permitted solid waste facility.

(xi) Records shall be maintained to track incoming feedstocks and finished compost. By September 1 of each year, operators shall submit a report to the Division that includes the weight or volume (in tons or cubic yards) of the feedstocks accepted, total compost produced, and any amount sold or used in the previous fiscal year (July 1 - June 30).

(xii) Records documenting compliance of the composting facility with these Rules shall be kept for a minimum of three years in a form suitable for submission to or inspection by the Division. Records shall be retained at the composting facility unless an off-site storage location is approved by the Division.

(xiii) A facility odor minimization plan shall be maintained and updated as stipulated in the following:

(I) The odor impact minimization plan shall be revised and submitted to the Division for any major modification as described in 391-3-4-.16(7).

(II) The odor impact minimization plan shall be reviewed annually by the operator to determine if any revisions are necessary.

(III) The odor impact minimization plan and results of the odor monitoring shall be used by the Division to determine whether the facility is following the procedures approved in its permit and its design and operational plan.

(xiv) The composting facility shall have a sign at its entrance that lists the name of the facility, permit number, days and hours of operation, feedstocks accepted, and emergency contact information.

(xv) The composting facility shall be closed in accordance with Rule 391-3-4-.11.

(d) Class 4 Composting Facilities

1. Any composting facility that is neither exempt under 391-3-4-.16(2), nor meets the conditions for Permit-by-Rule for Composting Facilities in 391-3-4-.16(4)(b), shall obtain a permit in accordance with following requirements:

2. Class 4 composting facilities may compost Category A, B, and C feedstocks.

3. Class 4 composting facilities shall comply with the design and operating standards for Class 3 composting facilities and the additional design and operating standards listed below:

(i) The design standards for Class 4 include:

(I) The compost pad for the receiving, mixing, and active composting areas shall prohibit ponding and limit infiltration of contact water by being uniformly graded at a minimum slope of 2%. The compost pad shall contain a layer to limit infiltration. This layer shall either be one foot in thickness with a hydraulic conductivity not exceeding 1x10-5 cm/sec or an approved alternative which meets or exceed this specification for the purpose of limiting infiltration. The layer to limit infiltration shall be constructed on a prepared and compacted subsurface, and overlain by a wearing surface that will resist deformation, prevent ponding, and prevent the infiltration of contact water. A minimum separation of five feet is required between the bottom of the infiltration layer and the seasonal high water table. Industrial waste proposed for the use in the construction of the compost pad shall be approved by the Division.

(II) Contact water shall be contained in a tank with secondary containment or in an impoundment with a liner system consisting of a one-foot layer of compacted soil with a hydraulic conductivity of no more than 1x10-7 cm/sec. The liner shall be overlain by a protective marker layer of sand or stone no less than one foot in thickness. An alternate liner system with the equivalent ability to limit infiltration may be approved by the Division.

(ii) The operating standards for Class 4 include:

(I) The composting pad shall be maintained and repaired as needed. Cracks or other defects identified in the wearing surface shall be promptly repaired under the

supervision of the facility manager. Any repairs or reconstruction of the layer limiting infiltration shall be completed under the supervision of a professional engineer, who shall prepare a report and certification of the repairs. A copy of the report(s) shall be maintained in the facility's operating records. Compost materials shall not be placed in areas with damage to the infiltration layer, and berms or other diversions shall be installed to prevent run-on of contact water into these areas.

(II) Facilities that compost biosolids or sewage sludge shall comply with all applicable federal regulations regarding sludge management at 40 CFR 501; 40 CFR 503; and 40 CFR 503, Subpart B.

(III) Groundwater monitoring systems shall be designed and installed in accordance with 391-3-4-.14. Additionally:

(A) Monitoring parameters shall be established based on the hydrogeologic data related to the site, the type of feedstocks accepted at the facility, and waste characterization analyses performed on incoming feedstocks.
(B) Monitoring shall be conducted semi-annually, at a minimum.

(IV) By the end of each operating day, all incoming Category B and C feedstocks shall be processed into the active composting pile, transferred to leak-proof containment, or mixed with bulking material and covered in a manner that minimizes nuisance odors and scavenging by vectors.

(e) Class 5 Composting Facilities

1. Class 5 composting facilities may compost Category A, B, C, and D feedstocks.

2. Class 5 composting facilities shall comply with the design and operating standards for Class 3 and 4 composting facilities and the additional design and operating standards listed below:

(i) The design standards for Class 5 include: Reserved.

(ii) The operating standards for Class 5 include:

(I) The feedstock receiving and mixing areas shall be in an enclosed structure. The receiving area of the composting operation shall be constructed of asphalt, concrete, or a composite liner system. Receiving entrances shall be closed and under negative pressure during receipt and processing of Category D feedstocks.
(II) By the end of each operating day, all incoming Category B, C, and D feedstocks shall be processed into the active composting pile, transferred to leak-proof containment, or mixed with bulking material to minimize nuisance odors and scavenging by vectors.

(f) Class 6 In-vessel Composting and Anaerobic Digestion Facilities

1. Class 6 facilities employ in-vessel composting or anaerobic digestion. These facilities may process Category A, B, C, and D feedstocks.

2. The design standards for Class 6 facilities include:

(i) A description of the basic site design.

(ii) A description of the type of technology to be used, including a copy of the drawings and specifications of the composting or digestion equipment and a process flow diagram that includes the types of the major material handling equipment and material flow.

(iii) A description of the unit's requirements for power, water, and wastewater removal.

(iv) A description of the type and quantities of feedstock to be processed.

(v) A description of the storage capacity for feedstocks, products and digestate, if applicable.

(vi) Anticipated annual operational capacity in cubic yards or gallons per day.

(vii) A description of the proposed methods used to control spills, run-off, litter, odors, dust, rodents, and insects, including the storage of feedstocks, compost and digestate, leak-prevention and spill release measures, and the methods to monitor effectiveness for control measures.

(viii) The facility shall have a site-specific odor minimization plan that includes, at a minimum, the following:

(I) A complaint response protocol.
(II) A description of operating procedures for minimizing odor.
(III) A description of the processes and technologies used to control odors.

(ix) A contingency plan detailing corrective or remedial actions to be taken in the event of equipment breakdown; odors; unacceptable waste delivered to the facility; spills; and other undesirable conditions such as fire, dust, noise, vectors, unusual traffic conditions, and litter. The plan shall also include the proposed emergency provisions for equipment breakdown or power failure.

3. The operating standards for Class 6 facilities include:

(i) Operation and management shall be under the supervision and control of an individual properly trained in the operation of such facilities at all times. Facility operations managers must be able to document training in the basics of composting and/or anaerobic digestion operations through a course approved by the Division.

(ii) The facility shall have a sign at its entrance that lists the name of the facility, permit number, days and hours of operation, feedstocks accepted, and emergency contact information.

(iii) The facility shall install and maintain storm water management controls.

(iv) Suitable measures to control vectors shall be applied.

(v) Suitable measures to prevent, control, and extinguish fires shall be applied.

(vi) The operator shall take measures to prevent spillage and promptly respond to any leaks or spills that occur.

(vii) By the end of each operating day, all incoming Category B, C, and D feedstocks shall be processed, transferred to leak-proof containment, or mixed with bulking material and covered in a manner that minimizes odors and scavenging by vectors. For facilities with an anaerobic digester, the feedstocks can be stored in leak-proof containers with lids that

prevent vector or odor problems for a period of time to allow for proper organic loading of the digester. This time period shall not exceed four days.

(viii) Digestate not contained in an in-vessel digester, sealed container, or sealed structure, shall, within 24 hours, be removed from the site and either disposed or processed at a permitted solid waste facility or incorporated into a permitted, on-site compost operation. Digestate may be stored in a sealed container or sealed structure for up to nine months. By-products from the separation of digestate shall be stored separately and in sealed containers.

(ix) Non-compostable waste shall be stored in a waste container and then recycled or disposed of at a permitted solid waste facility.

(x) For in-vessel composting operations, the operator shall ensure that the composting process reduces pathogens. The compost material shall be maintained at a minimum average temperature of 55°C or higher for three consecutive days, followed by at least 14 days at over 40°C with an average temperature of over 45°C.

(xi) *Facilities employing anaerobic digestion must minimize the uncontrolled release of biogas.*

(xii) Notice of final closure shall be provided to the Director within 60 days from final receipt of feedstock. Any site not receiving feedstock in excess of 180 days, unless properly closed or otherwise approved by the Division, shall be deemed closed and in violation of these Rules. Notice of closure shall include documentation that all feedstocks, compost materials and digestate have been removed from the facility and that the site has been stabilized in accordance with the Manual for Erosion and Sediment Control in Georgia.

(6) Criteria for Siting Composting Facilities.

(a) Class 2 composting facilities shall comply with the following criteria:

1. The facility shall not be located in the 100-year floodplain.
2. A 50-foot undisturbed buffer shall be maintained between the composting operation and the property line.
3. A 200-foot buffer shall be maintained between the composting operation and any adjacent residences and/or drinking water supply wells.
4. A 50-foot buffer shall be maintained between the composting operation and all streams.
5. A description of surrounding land uses up to a ½-mile radius shall be provided.
6. *Airport safety restrictions, as required by Rule 391-3-4-.05(1)(c) for MSWLF units, shall be met.*

(b) Classes 3-6 composting facilities and anaerobic digestion facilities shall comply with the following criteria:

1. The facility shall submit a letter from the local government authority stating that the proposed facility complies with local zoning and land use ordinances.

2. The facility shall submit written verification by the applicant that the facility is consistent with the local or regional solid waste management plan, as required in Rule 391-3-4-.02(4)(c) 5.

3. The facility shall not be located in the 100-year floodplain.

4. The facility shall submit a map of the topographic setting depicting features, including all upstream and downstream drainage areas affecting or affected by the proposed site, floodplain, gullies, karst conditions, wetlands, unstable soils, and percent slope.

5. A 100-foot undisturbed buffer shall be maintained between the composting operation and the property line.

6. A 500-foot buffer shall be maintained between the composting operation and any adjacent residences and/or any drinking water supply wells.

7. A 50-foot buffer shall be maintained between the composting operation and all streams.

8. A description of surrounding land uses up to a ½-mile radius shall be provided.

9. Airport safety restrictions as required by Rule 391-3-4-.05(1)(c) for MSWLF units, shall be met.

10. The facility shall submit a site assessment report, prepared by a professional geologist or geotechnical engineer registered in Georgia, addressing the above-listed criteria.

(c) In addition to meeting the Class 3 siting requirements, Class 4 and 5 composting facilities shall comply with the following siting criteria:

1. Submission of a hydrogeological assessment, as specified in 391-3-4-.05(1)(j) may be required.

2. Submission of an odor assessment that includes, at a minimum:

(i) The proximity of existing odor receptors;

(ii) An evaluation of the site and operation characteristics to determine the potential for impacts on the neighboring community from the off-site migration of odors from the proposed facility; and

(iii) A description of the design considerations or practices to be implemented to control the potential impacts of off-site odors generated from the facility.

(7) Permit Modifications for Class 3-6 Facilities.

(a) All modifications of existing facilities shall be classified as follows:

1. Major modifications include those changes which substantially alter the design of the facility, management practices, the types or categories of feedstocks processed, or the technologies employed, and due to the nature of the changes, would likely impact the facility's ability to adequately protect human health and the environment. Major modifications, therefore, require closer review and public input than minor modifications.

2. Major modifications shall include, but are not limited to, the following:

(i) A modification which adds a new solid waste handling process. This shall include, but not be limited to, the addition of a materials recovery facility, a composting operation co-located at an anaerobic digestion facility, baling operation, shredding operation, or liquid solidification operation.

(ii) A modification which involves a change to a site suitability requirement, which could have originally impacted the siting of the facility.

3. Minor modifications include changes that do not substantially alter the permit conditions, that do not reduce the capacity of the facility to protect human health or the environment, or that do not

prevent the facility from responding in a timely manner. These changes include common variations in the type and quantities of feedstocks managed, technological advancements, or changes necessary to comply with new Rules, where these changes can be implemented without substantially changing design specifications or management practices in the permit.

(i) Minor modifications shall include, but are not limited to, the following:

(I) Changing the name of the facility.

(II) A modification which involves the relocation of access roads.

(III) A modification which adds scales.

(IV) A modification which involves the addition or removal of on-site structures.

(V) A modification which involves the addition of or a change to a groundwater or surface water monitoring system.

(VI) A modification which involves the addition or removal of a Permit-by-Rule facility.

(VII) A modification which involves the removal of any solid waste handling facility.

(VIII) A modification which involves the addition of or a change to a closure or post-closure plan.

(IX) A modification which involves the addition of or a change to a method of contact water handling and/or treatment.

(X) A modification which involves the addition of a corrective action plan.

(XI) A modification which involves a change in ownership, or in the case of a corporation of over five percent of the stock in a corporation holding a permit, but does not involve the transfer of the permit.

4. All major modifications shall be subject to the following requirements:

(i) Submission of a completed application for a permit modification.

(ii) Submission of supporting documents accompanying the application for a permit modification that describe the exact change(s) to be made to the permit conditions and supporting documents referenced by the permit that explain why the change is needed.

(iii) Submission of a revised design for the requested change(s).

(iv) Submission of written verification by the applicant, as required by Rule 391-3-4- .05(1)(a), that the facility, as proposed to be modified, conforms to all local zoning/land use ordinances, if any.

(v) Submission of written verification by the applicant that the facility, as proposed to be modified, is consistent with local or regional solid waste management plans. The verification shall consist of letters from the host jurisdiction and generating jurisdictions verifying consistency with the approved local solid waste plan.

(vi) Submission of written verification by the applicant that a public hearing was held by the governing authority of the county or municipality in which the facility requesting the modification is located, not less than two weeks prior to granting approval of the modification. Submission of a typed transcript of the hearing. Submission of written verification that notice of such hearing was posted at the site of such facility and advertised in a newspaper of general circulation serving the county or counties in which the facility is located at least 30 days prior to such hearing.

(8) Testing.

(a) Class 3-6 composting facilities and anaerobic digestion facilities that compost on site shall meet the following test standards and requirements:

1. Samples and measurements taken for the purpose of product testing shall be representative of the composting activity and shall be conducted in accordance with methods and procedures approved by the Director.
2. The minimum number of samples that shall be collected and analyzed is shown in the table below. Samples to be analyzed shall be composted prior to the analysis.

Compost Quantity[1] (tons/yr)	**Frequency**
1 - 6,200	Once per quarter
6,201 - 17,500	Once every two months
Greater than 17,500	Once per month

[1]Either the amount of finished compost applied to the land, prepared for sale or given away on an "as is" (wet weight) basis.

If test results show the finished product is stable and in compliance with both metals and pathogens standards for a two-year period, the facility may request a reduction in the frequency of testing, provided there are no changes in feedstocks composted at the facility. Class 3 facilities may test for pathogens and trace metals at half the frequency, but overall testing for all other characteristics must be as defined in the table above.

3. All compost shall be tested for stability in accordance with methods and procedures approved by the Director.

(i) The stability results shall be documented in the facility's operating records.

4. All compost shall be tested for the presence of pathogens in accordance with methods and procedures approved by the Director.

(i) Either the density of fecal coliform in the finished compost shall be less than 1,000 most probable number (MPN) per gram of total solids (dry weight basis), or the density of Salmonella sp. bacteria in the finished compost shall be less than three MPN per four grams of total solids (dry weight basis) before the compost may be sold, given away, or applied to the land.

5. All compost shall be analyzed for metals in accordance with methods and procedures approved by the Director.

(i) The following pollutant concentrations shall not be exceeded:

Pollutant	**Monthly average concentration** (milligrams per kilogram) [1]
Arsenic	41
Cadmium	39
Copper	1,500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2,800

[1] On a dry weight basis.

(b) For Class 6 facilities that operate an anaerobic digester, the facility shall, at a minimum, monitor or test the following:

1. Chemical Oxygen Demand shall be tested daily if the feedstocks change on a daily basis or weekly if the feedstocks are consistent or if the digester is at steady state, with steady state being defined as the treatment level or the gas production is constant for at least three Hydraulic Retention Times (HRT).

2. Alkalinity shall be measured daily if the feedstocks change on a daily basis or weekly if the feedstocks are consistent or if the digester is at steady state, with steady state being defined as the treatment level or the gas production is constant for at least three Hydraulic Retention Times (HRT).

3. Gas production shall be monitored.

(c) Digestate that has not been analyzed for metal concentration, pathogen concentration, and any other contaminants as stipulated by the Division, or is known to contain any metal in amounts that exceed the maximum metal concentrations in 391-3-4-.16(8)(a)(5)(i), shall be designated for disposal or additional processing.

(d) The Division may approve alternative methods of compliance to meet the requirements of this section including, but not limited to, sampling frequencies.

Authority: O.C.G.A. Secs. 12-8-20 et seq.,

Rule 391-3-4-.17 Measuring and Reporting Requirements

(1) Reporting the quantities of solid waste managed:
   (a) Persons holding a municipal solid waste disposal permit, including permits-by-rule, shall report to the Director the total amount, in tons, of solid waste disposed of quarterly. Reports shall be filed by the 30th day after the beginning of each calendar quarter, covering the reporting period for the preceding quarter.
   (b) The reports shall contain, at a minimum, which cities and counties are served by the disposal facility and the total number of tons of solid waste received from each jurisdiction served during the reporting period. The required data shall be submitted on such forms as may be prescribed by the Director.

(2) Measurement Methods:
   (a) Where disposal facilities do not have scales at the disposal facility, or through contractual or other arrangements, do not weigh all municipal solid waste destined for the facility, the owner and/or operator shall require each type of commercial vehicle utilizing the facility to be weighed with such frequency that an accurate conversion from cubic yards to tons can be made for each commercial vehicle type not weighed.
   (b) Where such systems of estimating the weight are utilized, the owner or operator must prepare and submit to the Director for approval, a description of such systems for all existing sites. New disposal facilities must include this information as part of the permit application.

(3) Reporting remaining capacity of the site.
   (a) On July 1 of each year, persons holding a municipal solid waste landfill permit shall report to the Director the remaining capacity of the facility.
   (b) The remaining capacity shall be determined in cubic yards and the determinations hall be certified by the professional engineer, registered in the State of Georgia.
   (c) The rate of filling shall be determined and provided a long with an estimated completion date for the facility.

(4) Waste Disposal Surcharge.
   (a) Owners or operators of any solid waste disposal facility, other than an inert waste landfill as defined in these Rules or a private industry solid waste disposal facility, shall assess and collect, on behalf of the division from each disposer of waste, a surcharge per ton on solid waste disposed as required by O.C.G.A. §12-8-39. Surcharges assessed and collected on behalf of the division shall be paid annually to the division on July 1 for the preceding calendar year.
   (b) The surcharge required by subparagraph (4)(a) of this Rule, shall be calculated based on the reports required by paragraph (1) of this Rule and in accordance with actual weights received or other approved methods provided for in paragraph (2) of this Rule.

(5) For operating CCR units, the total volume of the CCR waste disposed in a CCR unit and the CCR removed, recovered, or diverted for beneficial use shall be reported to the Division on July 1 of each year after the first full year that the permit is in effect The required data shall be submitted on such forms as may be prescribed by the Director.

(6) The owner or operator of a municipal solid waste landfill shall notify the local governing authorities of any city and county in which such landfill is located of any release from the site of such landfill of a contaminant which is likely to pose a danger to human health. In addition, such owner or operator shall cause notice of such release to be published in the legal organ of the county in which such landfill is located. Compliance with the requirements of this Rule shall occur within 14 days of confirmation of such release by the Division.

Authority: O.C.G.A. Secs. 12-8-20 et seq., 12-8-23.

Rule 391-3-4-.18 Operator Certification

(1) Applicability: this Rule applies to all operators of municipal solid waste landfills, municipal solid waste thermal treatment technology facilities, and employees of the Department of Natural Resources who inspect these facilities.

(a) No person shall perform the duties of a municipal solid waste disposal facility operator without being duly certified under this Rule.

(b) No municipal solid waste disposal facility shall be operated in Georgia unless the operator is certified under this Rule.

(c) All inspectors of municipal solid waste disposal facilities shall be certified to inspect the same.

(2) Certificates:

(a) Any certificate granted under this Section shall be renewable every five years.

(b) The Division shall approve all examinations and courses to be used in determining the knowledge, ability, and judgment of applicants for certification under this Rule. Such courses and examinations shall be given at least twice annually.

(c) A Certified Landfill Operator or Inspector must meet the following minimum qualifications:

1. Graduate of high school or an accredited GED program, and have worked at a landfill in Georgia for at least six months. Prior to July 1, 1994, persons who lack the required high school or GED preparation and possess an equivalent level of math and literacy skills, may substitute five years experience as a landfill operator or manager in Georgia for the required high school or GED program; or

2. To conduct landfill inspections, be employed by the Georgia Department of Natural Resources and required by their job descriptions to conduct landfill inspections; and

3. Must have successfully completed the Landfill Certification Training Course and examination endorsed by the Division.

(d) Upon application, a certificate may be issued without examination, in a comparable classification, to any person who holds a certificate in any state, territory, or possession of the United States or any country, provided that the requirements for certification of operators under which the person's certificate was issued do not conflict with this Rule and are of a standard not lower than that specified by this Rule; and provided further that reciprocal privileges are granted to certified operators of this State.

(e) The Director may investigate the actions of any operator and may revoke or suspend the certificate of an operator, following a hearing conducted in accordance with Chapter 13 of Title 50, the "Georgia Administrative Procedure Act", when it is found that the operator has practiced fraud or deception; that reasonable care, judgment, or the application of his knowledge or ability was not used in the performance of his duties; or that the operator is incompetent or unable to perform his duties properly.

(f) The Director shall include, as a condition in a permit issued, a requirement that the municipal solid waste disposal facility operator be duly certified in accordance with this Rule.

Authority: O.C.G.A. Secs. 12-8-20 et seq., 12-8-23.

Rule 391-3-4-.19 Scrap and Used Tire Management

(1) Applicability.

(a) Scrap tire handling shall be regulated from the point of generation through the point of final disposition. The provisions of this Rule, except where exemptions apply, shall apply to all persons presently engaged in, or proposing to be engaged in, the retail sale of new replacement tires, handling of scrap tires, and/or the collection, inventory and marketing of used tires.

(b) All persons subject to regulation under this Rule shall, in addition to the requirements of 391-3-4-.19, handle scrap tires in accordance with the provisions of O.C.G.A. 12-8-20, et seq., and the Rules for Solid Waste Management, Chapter 391-3-4, applicable to solid waste.

(2) Definitions. For the purposes of this Rule:

(a) "Beneficial reuse" means the use of scrap tires for purposes other than its original intended use and that have been approved by the Division prior to reuse.

(b) "Enclosure" means structure with four sides and roof or an area surrounded by a wall or fence with the purpose of controlling or limiting access.

(c) "End user" means the last person who uses the scrap tires, chips, crumb rubber, or similar materials to make a product with economic value, or, in the case of energy recovery, the person who uses the heat content or other form of energy from the incineration, combustion or pyrolysis of waste tires, chips or similar materials.

(d) "Financial Assurance" means a mechanism designed to demonstrate that funds will be available to ensure compliance with statutory, regulatory and permit requirements of tire carriers and processors. The financial mechanism must be either a surety bond or an irrevocable letter of credit.

(e) "Manufacturer" means a person who produces new tires from raw materials for the original intended use on, but not limited to, automobiles, trucks, motorcycles, trailers, recreational vehicles, construction equipment, earth-moving equipment and aircraft.

(f) "Mixed Tires" means a group of tires that may consist of "used tires," "retreadable casings," and "scrap tires."

(g) "Organized Site Cleanup Activity" means scrap tire abatement activities conducted by a government entity, non-profit, or other organization.

(h) "Point of Final Disposition" means a location approved by the Division to receive scrap tires including, but not limited to, scrap tire processors, scrap tire sorters and end users.

(i) "Residuals" means by-products resulting from the processing of scrap tires including, but not limited to, fibers, metals, inner tubes and rims.

(j) "Retreadable Casing" means a scrap tire suitable for retreading. This includes casings that have value as a potential retreaded tire. This does not include casings with tread separation, unrepaired cuts, corroded belts, sidewall damage, run-flat or skidded.

(k) "Retail Dealer" means a person actively engaged in the business of selling new replacement tires. Retail dealers may also be, but are not limited to, manufacturers, wholesalers, and others who sell new replacement tires to the ultimate consumer.

(l) "Scrap Tire" means a tire that is no longer suitable for its original intended purpose because of wear, damage, or defect.

(m) "Scrap Tire Generator" means any person who generates scrap tires including, but not limited to, tire retailers; retail dealers; retreaders; scrap tire processors; scrap tire sorters; automobile dealers; private company vehicle maintenance shops; used tire dealers; garages, and service stations; and city, county, and state governments.

(n) "Scrap Tire Processing" means any method, system, or other treatment designed to change the physical form, size, or chemical content of scrap tires for beneficial use.

(o) "Scrap Tire Processor" means any person approved through a permit issued by the Division to receive and process scrap tires, but shall not include a registered secondary metals recycler operating a scrap metal shredder for the purpose of shredding metallic scrap, including scrap automobiles containing five or fewer scrap tires per automobile into specification grades of scrap metal.

(p) "Scrap Tire Sorter" means any person, other than a registered scrap tire generator or a scrap tire processor, who handles mixed tires by separating used tires and retreadable casings from scrap tires and is approved through a permit by the Division.

(q) "Tire" means a continuous solid or pneumatic rubber covering designed for encircling the wheel of a motor vehicle and which is neither attached to the motor vehicle nor a part of the motor vehicle as original equipment.

(r) "Tire Carrier" means any person engaged in collecting or transporting tires, other than new tires. For the purpose of this Rule, tire carrier does not include a transporter of scrap or crushed vehicles.

(s) "Tire Manifest" means a form or document used to identify the quantity, composition, origin, routing and destination of scrap tires during transportation from the point of generation to a point of final disposition and to track used tires from the point of generation to another location.

(t) "Tire Retailer" means any person, other than a used motor vehicle parts dealer licensed in accordance with Chapter 47 of Title 43, engaged in the business of selling new replacement tires or used tires.

(u) "Tire Retreader" means any person actively engaged in the business of retreading scrap tires by scarifying the surface to remove the old surface tread and attaching a new tread to make a usable tire.

(v) "Ultimate Consumer" means the last person who receives and uses a new replacement tire.

(w) "Used Tire" means a tire which has a minimum of 2/32inch of road tread and which is still suitable for its original purpose but is no longer new. A tire retailer shall inventory and market used tires in substantially the same fashion as a new tire and be able to provide satisfactory evidence to the division that a market for the tire exists and that the tire is in fact being marketed as a used tire. A used tire shall not be considered solid waste.

(x) "Used Tire Dealer" means a tire retailer selling used tires as defined in this Rule.

(3) Retail Dealers.

(a) Beginning July 1, 1992, a tire management fee is imposed upon the retail sale of all new replacement tires in this state of $1.00 per tire sold. The fee shall be collected by retail dealers at the time the retail dealer sells a new replacement tire to the ultimate consumer; provided, however, that a Georgia tire distributor who sells tires to retail dealers must collect such fees from any retail dealer who does not have a valid scrap tire generator identification number issued by the Division.

1. New replacement tires include, but are not limited to, automobile, truck, heavy equipment, motor bike, boat and other trailers, aircraft, and recreational vehicles.

2. Local and state governments are not exempt from the fee.

3. The fee shall not be imposed on the sale of:

   (i) Tires with a rim size less than 12 inches;

   (ii) Tires from any device moved exclusively by human power; or

   (iii) Tires used exclusively for agricultural purposes, except farm truck tires.

(b) Retail dealers shall remit fees and a quarterly tire fee report documenting the number of new replacement tires sold to the Division. The retail dealers shall use forms provided by the Division. The fee and report shall be remitted by the 30thday of April, July, October, and January of each year, covering the period for the preceding quarter.

(c) In collecting, reporting, and paying the fees due under this section, each distributor or retailer shall be allowed the following deductions, but only if the amount due was not delinquent at the time of payment:

1. A deduction of three percent of the first $3,000.00 of the total amount of all fees reported due on such report; and

2. A deduction of one-half of one percent of the portion exceeding $3,000.00 of the total amount of all fees reported on such report.

(4) Scrap Tire Generators.

(a) Any person who generates scrap tires in this state shall have a scrap tire generator identification number (ID number #) issued by the Division. The ID number shall be used on tire manifests. A separate ID number shall be required for each business location.

(b) The following persons shall not be required to have an ID number:

1. Scrap tire generators who generate scrap tires at out-of-state locations and ship their scrap tires to a point of final disposition in Georgia; and

2. A licensed used motor vehicle parts dealer or registered secondary metals recycler, who does not generate scrap tires for disposal or recycling.

3. A municipal solid waste collector holding a valid solid waste collection permit under authority of this part whose primary business is the collection of municipal solid waste;

4. A private individual transporting no more than 10 of the individual's own or a private individual transporting more than 10 tires if such individual can provide proof of purchase with receipt for such tires;

5. Any person transporting tires collected as part of an organized site cleanup activity;

(c) Scrap tire generators shall initiate a tire manifest to track scrap tires during transportation from the point of generation to an approved point of final disposition. The tire manifest shall include the following information:

1. Name, address, county, telephone number and scrap tire generator identification number;

2. An estimate of the number (accurate to within 10% of actual number) or weight of scrap tires to be transported;

3. Signature of the generator certifying the estimate and the date the scrap tires were picked up;

4. Name, address, telephone number and permit number of the tire carrier;

5. Signature of the permitted tire carrier, the date of pickup from the generator and the date of delivery to the point of final disposition;

6. Name, address, telephone number and permit number of the point of final disposition;

7. Signature of authorized representative at the point of final disposition certifying the weight (in tons or number of tires) and the date received from the tire carrier.

(d) If a generator chooses to use tons of tires rather than actual numbers of tires on the tire manifest for passenger and truck tires, the following conversion factor must be used:

1. Passenger Tires: 2000 lb. (one ton) = 89 tires (22.5 lb/tire)

2. Truck Tires: 2000 lb. (one ton) = 17 tires (120 lb/tire)

(e) Scrap tire generators shall ensure that any person collecting and transporting their scrap tires hold a valid tire carrier permit issued by the Division and that their scrap tires were delivered to the point of final disposition designated by the generator on the scrap tire manifest.

(f) Scrap tire generators shall retain a copy of the tire manifest signed and dated by the carrier at the time the scrap tires were collected or transported. This tire manifest copy should be kept until the generator receives the original tire manifest signed by the generator, carrier and point of final disposition. The original tire manifest shall be kept on-site for a period of three years.

(g) A scrap tire generator shall notify the Division in writing of any carrier who fails to return a properly completed tire manifest to the generator within 30 days from scrap tire pickup. Such notification shall be filed within 15 days following any failure of the carrier to deliver the tire manifest with original signature to the generator.

(h) Scrap tire generators may designate whether a tire, because of wear, damage, or defect, is a "used tire", or "retreadable casing" as defined in these Rules. However, if a generator fails to designate which tires are "used", or "retreadable casings" then all tires transported shall be considered scrap tires and must be indicated on the tire manifest.

(5) Tire Carriers.

(a) Unless otherwise exempted, any person collecting or transporting scrap or used tires shall have a tire carrier permit issued by the Division. A permit shall not be issued unless the financial assurance, as provided for in these Rules, has been submitted and approved by the Division.

(b) A separate permit and financial assurance instrument shall be required for each tire carrier business location.

(c) A tire carrier shall transport scrap tires only to a point of final disposition as defined in these Rules.

(d) Storage of scrap tires by tire carriers is prohibited.

(e) The permitted tire carrier shall maintain financial assurance in a format provided by the Division. The required financial assurance is as follows:

1. $10,000.00 for carriers transporting up to 5,000 scrap tires per month.

2. $20,000.00 for carriers transporting more than 5,000 scrap tires per month.

(f) The permitted tire carrier shall submit a quarterly report to the Division on forms provided by the Division. Reports shall be submitted by the 30th day of April, July, October and January of each year and cover the reporting period for the preceding calendar quarter. The tire carrier shall retain copies of the quarterly reports, tire manifests, invoices and weight tickets for three years at their place of business or other location approved by the Division. The tire carrier shall make these records available for review upon request by the Division.

(g) The permitted tire carrier shall display a decal issued by the Division on both the driver's and passenger's doors on each vehicle used to collect or transport tires. A decal shall not be required for a tire carrier that collects tires exclusively from outside this state and transports them directly to a scrap tire processor or end user within this state.

1. By August 1stof each year, tire carriers shall purchase decal(s) for each vehicle used to collect or transport tires.

2. The tire carrier shall pay the Division a nominal fee for each decal issued.

3. Decals are valid for a one-year period and shall expire on July 31st of each year.

(h) It shall be the responsibility of the permitted tire carrier to return the tire manifest, with the three required original signatures, to the scrap tire generator no later than 30 days from the date on which the carrier collected the scrap tires from the generator.

(i) The following persons shall not be required to have a tire carrier permit:

1. A tire retailer transporting its own used tires, if such dealer can provide proof of purchase with receipt for all used tires being transported and a document verifying the origin, route and destination of such used tires;

2. A municipal solid waste collector holding a valid solid waste collection permit under authority of this part whose primary business is the collection of municipal solid waste;

3. A private individual transporting no more than 10 of the individual's own tires or a private individual transporting more than 10 tires if such individual can provide proof of purchase with receipt for such tires;

4. A company transporting the company's own tires to a scrap tire processor or end user or for proper disposal;

5. Any person transporting tires collected as part of an organized site cleanup activity;

6. The United States, the State of Georgia, any county, municipality, or public authority.

7. Other persons, as approved by the Division, on a one time or temporary basis, as needed to further the intent of O.C.G.A. 12-8-20, et seq., that scrap tires be reused or recycled rather than disposed.

(6) Scrap Tire Storage.

(a) No person may store more than 25 scrap tires anywhere in this state.

(b) *If scrap tires are secured in a locked enclosure or are otherwise adequately secured in a manner* suitable to prevent unauthorized access, then paragraph (6)(a) of this Rule shall not apply to the following:

1. A solid waste disposal site permitted by the Division, if the permit authorizes the storage of scrap tires prior to their disposal;

2. A tire retailer or a publicly owned vehicle maintenance facility with not more than 1,500 scrap tires in storage;

3. A tire retreader with not more than 3,000 scrap tires in storage, so long as the scrap tires are of the type the retreader is actively retreading;

4. A licensed used motor vehicle parts dealer registered with the Secretary of State's office, a registered secondary metals recycler or a privately owned vehicle maintenance facility that operates solely for the purpose of servicing a commercial vehicle fleet with not more than 500 scrap tires in storage; and

5. A permitted scrap tire processor or sorter that has received approval prior to October 28, 2015 or holds a current permit, so long as the number of scrap tires in storage does not exceed the quantity approved by the Division. The Division may grant a waiver for the enclosure requirement if the person requesting the waiver can definitively show a significant and unique economic hardship which would impair the person's ability to continue operating his or her business.

6. A farm with 100 or fewer scrap tires in storage or in use for agriculture purposes. In addition, the Division may grant waivers to allow the storage or use of more than 100 scrap tires for agricultural purposes, if such storage or use does not pose a threat to human health or the environment.

(c) Any person storing scrap tires is subject to the following requirements:

1. Unless otherwise specified in an approved plan by the Division, all scrap tires shall be stored in a manner (e.g. under roof, secured tarp, or the like to prevent water accumulation) that controls the *breeding and harborage of mosquitoes, rodents and other vectors;*

2. Activities involving open flames and other flammable materials (oil, gas, fuel) shall not be allowed within 25 feet of a scrap tire storage area, with the exception of maintenance activities involving torches and welding equipment, as long as a fireproof barrier is used;

3. A 50-foot wide fire lane shall be placed around the perimeter of each scrap tire pile.

4. All persons engaged in the collection, storage or processing of scrap tires, retreadable or used tires shall control the presence of vectors or other nuisance pests associated with storage of the tires. Such pests may include, but are not limited to, mosquitoes, rats, mice, snakes and other animals living in or adjacent to the tire storage. Permitted or approved facilities shall maintain records for three years that include, but are not limited to:

   (i) Type of control method used;

   (ii) If chemical control - the name of the chemical(s);

   (iii) Dates and amounts of chemical(s) used; and

   (iv) Chemical storage location.

(7) Criteria for Scrap Tire Processors, Sorters and Disposal Facilities.

(a) Processing operations shall include, but not limited to, shredding, chopping, chipping, splitting, pyrolysis, microwave, and cryogenic operations. Provided financial assurance requirements of these rules have been met, permitted scrap tire processors in existence on the effective date of this Rule may continue to operate under their existing permit. Existing facilities requesting modifications after the effective date of this Rule must fully comply with this Rule. Scrap tire processing facilities shall meet the following requirements:

1. All scrap tire processors located in this state shall submit an application and obtain a permit issued by the Director prior to operation. No person may process scrap tires without a permit issued from the Director.

2. A permitted scrap tire processor shall maintain financial assurance in a format provided by the Division in the amount of $20,000 for each business location.

3. All scrap tire processors shall have and follow an operations plan approved by the Division. The facility owner(s) or authorized representatives shall submit a written request to modify an approved operations plan. Any proposed modification to the facility and/or operations shall not be implemented until approved by the Division.

4. The operations plan shall include, zoning approval, proof of fire inspection, operational narrative, site plan and drawing of the operation, and shall be designed by a professional engineer licensed to practice in Georgia.

5. Processors must show that they have the necessary operable equipment in place to process scrap tires prior to receiving scrap tires for processing.

6. Storage Requirements.

   In addition to the scrap tire storage requirements in section (6) of these Rules, the following requirements apply:

   (i) Storage limits are based on the processing equipment capability, proof of market, recycling rate and available storage space; and

   (ii) Storage of scrap tires shall not exceed a 30 day operating supply. Prior approval for increased storage limits must be approved by the Division if 30 day operating supply cannot be met;

(iii) Requirements for Storage in Buildings.

Scrap tires stored indoors will be managed in accordance with "The Standard for Storage of Rubber Tires," NFPA 231D, 1998 edition, published by the National Fire Protection Association or recommendation of local fire authority.

(iv) Requirements for Storage in Trailers.

Any processor with tires, product or residuals in enclosed trailers shall be subject to the following requirements:

(I) Trailer storage areas must be clearly depicted on a site plan; and

(II) Storage area shall be no greater than 10,000 square feet per storage area.

(III) A minimum of two feet must be maintained between trailers (side-to-side and end-to-end). No more than two rows of trailers per storage area may be stored at any facility. Such storage must be end-to-end and the trailer must be stored in a manner that allows direct removal of the trailer if needed. Empty trailers stored in the area designated for scrap tire storage are subject to the same separation requirements.

(IV) A 50-foot wide fire lane shall be placed around the perimeter of each scrap tire storage area. The fire lane shall be kept free of debris, vehicles, trailers, weeds, grass and other potentially combustible material.

(v) Requirements for Tires, Processed Tires, Product, and Residuals Stored on the Ground

(I) A tire, processed tire, product, or residual pile shall have no greater than the following maximum dimensions:

I. Area: 10,000 square feet; and

II. Height: 15 feet

(II) A 50-foot wide fire lane shall be placed around the perimeter of each pile with the exception of noncombustible materials (rims, wires, etc). The fire lane shall be kept free of debris, vehicles, trailers, weeds, grass and other potentially combustible material. Existing processors may comply with the fire lane requirements documented on an approved plan until the plan is modified.

(III) Storage of whole tires, products, and residuals near buildings is prohibited unless:

I. A non-combustible/non-flammable barrier (firewall) is constructed in accordance with applicable state or local firewall requirements and a 25-foot fire lane, unless otherwise set by the local fire authority, is maintained between the firewall and the building; and

II. The whole tires, processed tires, products, and residuals shall not exceed the height of the firewall.

7. General Operation Standards.
Processors shall meet the following operational requirements:

(i) Access to the processing facility and fire lane(s) for emergency vehicles shall be unobstructed at all times, with the exception of routine loading or unloading operations, provided the vehicles are attended by their drivers during that time.

(ii) In the event of fire, the owner or operator shall immediately take all necessary steps to control and extinguish the fire and control any resulting runoff (i.e., water, oil or other fluid residue).

(iii) The run-off resulting from fires or fire suppression actions shall be prevented by berms or other detention structures approved by the Division from entering drains and waters of the state. Material(s) used in berm construction must be non-combustible, non-flammable and prevent run-off.

(iv) The facility owner or operator shall provide documentation that the local fire authority conducted a fire safety survey. The facility owner or operator shall arrange for an additional fire safety survey as part of any modification request that would increase the amount of scrap tires in storage.

(v) Operations involving the use of open flames shall not be conducted within 25 feet of a scrap tire stockpile, processed tire stockpile or processing equipment. An exception is allowed for maintenance activity using torches or welding equipment, as long as fireproof curtains or other fireproof barrier shields the ignition source from storage or equipment areas.

(vi) Access to the facility shall be controlled using fences, gates or other means of security.

(vii) An attendant shall be present when the scrap tire processing facility is open for business if the facility receives tires from persons other than the operator of the facility.

(viii) Any residuals from scrap tire processing shall be managed so as to be contained on-site and shall be controlled and disposed of in a permitted solid waste handling facility or be properly recycled.

(ix) A scrap tire processing facility shall not accept any scrap tires for processing if it has reached its approved or permitted staging limit. At least 75 percent of both the scrap and processed tires that are accumulated by the scrap tire processing facility each calendar quarter, and 75 percent by weight or volume of all scrap tires previously received and not recycled, reused or properly disposed during the preceding calendar quarter shall be processed and removed from the facility for disposal or recycling from the facility during the quarter or disposed of in a solid waste handling facility approved to accept scrap tires.

(x) Communication equipment shall be maintained at the scrap tire processing facility to ensure that the facility attendant or operator can contact local emergency response authorities in the event of a fire. The facility will notify the Division within 24 hours in the event of a fire requiring a response by the local fire jurisdiction.

(xi) The emergency/contingency portion of the operations plan shall include, but not be limited to:

(I) A list of names and numbers of persons to be contacted in the event of a fire, flood or other emergency;

(II) A list of the emergency response equipment at the facility, its location and how it should be used in the event of a fire or other emergency; and

(III) A description of the procedures that should be followed in the event of a fire, including procedures to contain and dispose of the oily material generated by the combustion of large numbers of tires.

(xii) Facility shall have storm water control measures.

(xiii) Facility shall have erosion and sediment control measures.

8. Recordkeeping and Reporting.

(i) The owner or operator of a scrap tire processing facility shall retain required records for three years and make such records available for inspection by the Division. Required records include, but are not limited to:

(I) Copies of the tire manifests for all tires received;

(II) If more than ten scrap tires were delivered by a person who is not a permitted tire carrier or generator, the number or weight of tires delivered, the date and the person's name, address, telephone number and signature;

(III) Properly dated, numbered and signed weight tickets, from certified scales at the facility or from a certified public or private scale, for scrap tires or processed tire materials received at or leaving the facility;

(IV) For all scrap tires shipped for reuse or retreading, the quantity and type (passenger car, truck tires, off the road, or others) shipped and the name and location of the person receiving the tires; and

(V) For all processed tires and residuals, invoices and shipping tickets identifying the date, weight, name, address and phone number of the point of final disposition.

(ii) Owners and operators of scrap tire processing facilities shall submit a quarterly report to the Division. The quarterly report shall be submitted by the 30th day of April, July, October and January. The report shall include, but not limited to, the following:

(I) The facility name, address and permit number;

(II) The calendar quarter and year covered by the report;

(III) The total weight of scrap or processed tires received at the facility during the period covered by the report;

(IV) The total weight of scrap tires, processed tires, residuals and used tires shipped from the facility during the period covered by the report; and

(V) The amount of scrap, processed tires or residuals remaining on site.

9. Closure of Scrap Tire Processing Facilities.

(i) The owner or operator shall provide procedures in the operations plan for closing the facility, including, but not limited to:

(I) Notification to the Division of intent to close 30 days prior to the scheduled date for closing;

(II) Closure activities and schedule for completion;

(III) Control of access to the site; and

(IV) Notification to the Division when all closure activities are completed.

(b) Sorters.

1. Sorters in existence on the effective date of this Rule may continue to operate under their existing approval. New or existing facilities requesting modifications after the effective date of this Rule must be permitted by the Division.

2. All sorters shall have and follow an operations plan approved by the Division. The facility owner(s) or authorized representatives shall submit a written request to modify an approved operations plan. Any proposed modification to the facility and/or operations shall not be implemented until approved by the Division.

3. The operations plan shall include, zoning approval, proof of fire inspection, operational narrative, and site plan and drawing of the operation.

4. Storage Requirements.
In addition to the scrap tire storage requirements in section (6) of these Rules, the following requirements apply:

(i) Storage limits are based on the permit.

(ii) Scrap tires stored indoors will be managed in accordance with "The Standard for Storage of Rubber Tires," NFPA 231D, 1998 edition, published by the National Fire Protection Association or recommendation of local fire authority.

(iii) Requirements for Storage in Trailers.

Any sorter with tires shall be subject to the following requirements:

(I) Trailer storage areas must be clearly depicted on a site plan; and

(II) Storage area shall be no greater than 10,000 square feet per storage area.

(III) A minimum of two feet must be maintained between trailers (side-to-side and end-to-end). All trailers in the storage area must be stored in a manner that allows an unobstructed path for direct removal of the trailer at all times. Empty trailers stored in the area designated for scrap tire storage are subject to the same separation requirements.

(IV) A 50-foot wide fire lane shall be placed around the perimeter of each scrap tire storage area. The fire lane shall be kept free of debris, vehicles, trailers, weeds, grass and other potentially combustible material.

(iv) Requirements for Tires on the Ground

(I) A tire pile shall have no greater than the following maximum dimensions:

I. Area: 10,000 square feet; and

II. Height: 15 feet

(II) A 50-foot wide fire lane shall be placed around the perimeter of each pile with the exception of noncombustible materials (rims, wires, etc.). The fire lane shall be kept free of debris, vehicles, trailers, weeds, grass and other potentially combustible material.

(III) Storage of whole tires near buildings is prohibited unless:

I. A non-combustible/non-flammable barrier (firewall) is constructed in accordance with applicable state or local firewall requirements and a 25-foot fire lane, unless otherwise set by the local fire authority, is maintained between the firewall and the building; and

II. The whole tires shall not exceed the height of the firewall.

5. General Operation Standards.
Sorters shall meet the following operational requirements:

(i) Access to the sorter facility and fire lane(s) for emergency vehicles shall be unobstructed at all times, with the exception of routine loading or unloading operations, provided the vehicles are attended by their drivers during that time.

(ii) In the event of fire, the owner or operator shall immediately take all necessary steps to control and extinguish the fire and control any resulting runoff (i.e., water, oil or other fluid residue).

(iii) The run-off resulting from fires or fire suppression actions shall be prevented by berms or other detention structures approved by the Division from entering drains and waters of the state. Material(s) used in berm construction must be non-combustible, non-flammable and prevent run-off.

(iv) The facility owner or operator shall provide documentation that the local fire authority conducted a fire safety survey. The facility owner or operator shall arrange for an additional fire safety survey as part of any modification request that would increase the amount of scrap tires in storage.

(v) Operations involving the use of open flames shall not be conducted within 25 feet of a scrap tire stockpile. An exception is allowed for maintenance activity using torches or welding equipment, as long as fireproof curtains or other fireproof barrier shields the ignition source from storage or equipment areas.

(vi) Access to the sorter facility shall be controlled using fences, gates or other means of security.

(vii) An attendant shall be present when the scrap tire sorter is open for business if the sorter facility receives tires from persons other than the operator of the facility.

(viii) A scrap tire sorter facility shall not accept any scrap tires if it has reached its approved or permitted storage limit. At least 75 percent of both the scrap tires that are accumulated by the scrap tire sorter facility each calendar quarter, and 75 percent by weight or volume of

all scrap tires previously received and not reused or properly disposed during the preceding calendar quarter shall be removed from the facility for disposal or recycling from the facility during the quarter or disposed of in a solid waste handling facility approved to accept scrap tires.

(ix) Communication equipment shall be maintained at the scrap tire sorter facility to ensure that the facility attendant or operator can contact local emergency response authorities in the event of a fire. The facility will notify the Division within 24 hours in the event of a fire requiring a response by the local fire jurisdiction.

(x) The emergency/contingency portion of the operations plan shall include, but not be limited to:

(I) A list of names and numbers of persons to be contacted in the event of a fire, flood or other emergency;

(II) A list of the emergency response equipment at the facility, its location and how it should be used in the event of a fire or other emergency; and

(III) A description of the procedures that should be followed in the event of a fire, including procedures to contain and dispose of the oily material generated by the combustion of large numbers of tires.

(xi) Facility shall have storm water control measures.

(xii) Facility shall have erosion and sediment control measures.

6. Recordkeeping and Reporting.

(i) The owner or operator of a scrap tire sorter facility shall retain required records for three years and make such records available for inspection by the Division. Required records include, but are not limited to:

(I) Copies of the tire manifests for all tires received;

(II) If more than ten scrap tires were delivered by a person who is not a permitted tire carrier or generator, the number or weight of tires delivered, the date and the person's name, address, telephone number and signature;

(III) For all scrap tires shipped for reuse or retreading, the quantity and type (passenger car, truck tires, off the road, or others) shipped and the name and location of the person receiving the tires; and

(IV) For all sorter scrap tires, invoices and shipping tickets identifying the date, weight, name, address and phone number of the point of final disposition.

(ii) Owners and operators of scrap tire sorter facilities shall submit a quarterly report to the Division. The quarterly report shall be submitted on the 30th day of April, July, October and January. The report shall include, but not be limited to, the following:

(I) The facility name, address and permit number;

(II) The calendar quarter and year covered by the report;

(III) The number or tons of scrap tires received at the facility during the period covered by the report;

(IV) The number or tons of scrap tires shipped from the facility during the period covered by the report; and

(V) The number or tons of scrap tires remaining on site.

(iii) Muncipalities operating sorter facilities for the purpose of collection are exempt from the reporting and recordkeeping requirements contained in 391-3-4-.19(7)(b)6(ii).

7. Closure of Scrap Tire Sorter Facilities.

(i) The owner or operator shall provide procedures in the operations plan for closing the facility, including, but not limited to:

(I) Notification to the Division of intent to close 30 days prior to the scheduled date for closing;

(II) Closure activities and schedule for completion;

(III) Control of access to the site; and

(IV) Notification to the Division when all closure activities are completed.

(c) Disposal Operations: All solid waste disposal facilities (landfills and thermal treatment technology facilities) having a valid Solid Waste Handling Permit issued by the Director are approved to receive scrap tires except as provided in O.C.G.A. 12-8-40-.1(b).

(8) Recycling and Beneficial Reuse of Scrap Tires.

(a) For the purposes of this Rule, the following criteria will be used to determine if scrap tires are being recycled:

1. The scrap tires or processed scrap tires must have a known use, reuse or recycling potential; must be feasibly used, reused or recycled; and must have been diverted or removed from the solid waste stream for sale, use, reuse, or recycling, whether or not requiring subsequent separation and processing.

2. Scrap tires or processed scrap tires are not accumulated speculatively if the person accumulating them can show there is a known use, reuse, or recycling potential for them; that they can be feasibly sold, used, reused or recycled; and during the preceeding 90 days, the amount of scrap or processed scrap tires recycled, sold, used or reused equals at least 75 percent by weight or volume of the tires received during the 90-day period.

3. Proof of recycling, sale, use, or reuse shall be provided in the form of bills of sale, or other records showing adequate proof of movement of the scrap tires in question to a recognized recycling facility or for proper use or reuse from the accumulation point. Proof must be provided that there is a known market or disposition for the scrap tires or processed scrap tires and must show that they have the necessary equipment to do so, prior to receiving scrap tires for processing.

4. A scrap tire is "sold" if the generator of the scrap tire or the person who processed the scrap tire received consideration or compensation for the material because of its inherent value.

5. A scrap tire is "used, reused, or recycled" if it is either:

(i) Employed as an ingredient (including use as an intermediate) in a process to make a product (e.g., utilizing crumb rubber to make rubber-asphalt); or

(ii) Employed in a particular function or application as an effective substitute for a commercial product (e.g., using shredded tires as a substitute for fuel oil, natural gas, coal, or wood in a boiler or industrial furnace), as long as such substitution does not pose a threat to human health or the environment, and so long as the facility is not a solid waste thermal treatment technology facility or utilizing shredded tires as a soil amendment, aggregate, etc., or

(iii) Reused for its original intended purpose as a used tire, or reused for other purposes approved by the Division, such as playground equipment, erosion control, etc.

(b) Persons proposing to use more than 25 scrap tires in a beneficial reuse project shall submit a proposal and be approved by the Division prior to commencing beneficial reuse project.

(9) Used Tire Dealer.

(a) Any person who acts as a used tire dealer in this state shall have a used tire dealer identification (ID) number issued by the Division, which shall be used on tire manifests. A separate ID number shall be required for each business location, except mobile locations.

(b) Used tire dealers shall obtain a tire carrier permit for transportation of used tires other than their own.

(c) Used tire dealers transporting tires other than their own shall initiate a tire manifest to track used tires from the point of generation to another location. The following information shall be provided on the tire manifest:

1. Name, address, county, telephone number and used tire dealer ID number;

2. The number of used tires to be transported;

3. Signature of the generator and the date the used tires were picked up;

4. Name, address, telephone number and permit number of the tire carrier;

5. Signature of the tire carrier, the date of pickup from the generator and the date of delivery to final location;

6. Name, address, telephone number and permit number of business location receiving the used tires;

7. Signature of authorized representative at the business received from the tire carrier.

(d) Used tire dealers shall keep an inventory of all used tires to be updated quarterly. Such inventory shall contain, at a minimum, number of tires at the business location categorized by rim size.

(e) Used tire dealers shall implement suitable measures to control vectors.

Authority: O.C.G.A. § 12-8-20 et seq.

Rule 391-3-4-.20 Enforcement

The administration and enforcement of these Rules shall be in accordance with the Georgia Comprehensive Solid Waste Management Act, O.C.G.A. 12-8-20, et seq., the Executive Reorganization Act of 1972, O.C.G.A. 12-2-1, et seq., and the Georgia Administrative Procedure Act, O.C.G.A. 50-13-1, et seq.
Cite as Ga. Comp. R. & Regs. R. 391-3-4-.20

Authority: O.C.G.A. Sec. 12-8-20et seq., as amended.
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Amended: F. Jun. 7, 1993; Jun. 27, 1993.